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## ORIGINAL LECTURES.

### CLINICAL LECTURE

### ON THE CLASSIFICATION OF LARYNGEAL NEUROSES.

*A Summary from Demonstrations at the New York Polyclinic.*

BY LOUIS ELSBERG, M.D.,

Professor of Laryngology and Rhinology.

GENTLEMEN,—To-day I am going to redeem my promise to give you a connected account of my classification of laryngeal neuroses. This classification is one for practical purposes, and is partly physiological and partly anatomical, to facilitate analysis and understanding of the morbid conditions as they present themselves. As you know, laryngeal neuroses concern either sensation or motion, or both sensation and motion combined. During the session about to close we have had before us a number of patients illustrating the various affections to which the designation "laryngeal neuroses" is properly applied. We have excluded from that category every case in which the disorder was not what is called "functional;" *i.e.*, every case in which morbid sensation depended upon inflammatory or other structural change of the part, or in which motion was interfered with by organic or mechanical causes. With this restriction, you have seen that laryngeal disordered mobility is much more frequently met with than disordered sensibility, and that while the latter, except in certain general conditions of the system, very rarely occurs without (at least some degree of) the former, motor power over the vocal organs is often affected without interfering with normal sensation. To such motor disturbances I have given the systematic name "Laryngeal Dyskinesia;" to sensory, that of "Laryngeal Dysæsthesia."

I classify dysæsthesia (*a*) in reference to quantity or degree of sensation, as—I. Diminished sensibility, or hypæsthesia, and II. Increased sensibility, or hyperæsthesia; and (*b*) in reference to quality or kind of sensation, as—III. Perverted sensibility, or paræsthesia.

I have abundantly demonstrated to you that we must discriminate between three different kinds of sensibility of the throat,—viz., 1, tactile, by which temperature and pressure are appreciated; 2, dolorous, by which pain is appreciated; and 3, reflex, from which result muscular contractions, as well as intravascular and secretory phenomena.

The following tabular statement comprises the classification to which I have adhered for some years, and which I find most useful for designating the affection from which patients suffer. In individual cases some of the various conditions in the list are sometimes curiously combined, or exist on opposite sides of the larynx.

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| I. Hypæsthesia. | 1. Anæsthesia.<br>2. Analgesia (Analgia, Anodynia).<br>3. Anæsthesia dolorosa.<br>4. Tactile hypæsthesia and hypalgia.<br>5. Reflex hypæsthesia. | | | |
| II. Hyperæsthesia. | 1. Tactile hyperæsthesia. | | | |
| | 2. Hyperalgia (algesia, hyperalgesia). | Spontaneous. | Peripheral. | Constant. |
| | | From external impression. | In nerve-trunk, or neuralgia. | Paroxysmal, or true neuralgia. |
| | 3. Reflex hyperæsthesia. | Muscular effects. | Cough, choking, spasm, etc. | |
| | | Circulatory effects. | Flushing, paling. | |
| | | Secretory effects. | | |
| III. Paræsthesia. | The perversions of sensibility are so various that it is impossible to classify them or to enumerate them all. There are, however, perversions of tactile, of dolorous, and of reflex sensibility. Among the first mentioned, the most frequent are the sensation of heat or burning (the opposite—a sense of coldness—is very rare, but I have also seen that) and the sensation of the touch of a foreign body, attention being given mainly to its shape and its weight or pressure. Patients describe all possible and impossible shapes and materials in endeavoring to give an account of the perverted sensations. I have sometimes thought most of them might be arranged under the three heads,—1, sphæræsthesia; 2, zonæsthesia, or strangalæsthesia; and 3, akanthæsthesia; comprising, under the first, the sensation of a bulky body, generally ball-shaped; under the second, a cincture or band feeling, a sense of constriction; and under the third, the sensation of a sharp-pointed body, piercing or cutting. | | | |

For a long time I thought that just as the cases of sensory disturbance, or dysæsthesia, are classifiable under the three heads of diminished, increased, and perverted sensation,—*i.e.*, hypæsthesia, hyperæsthesia, and paræsthesia,—so the cases of motor disturbance, or dyskinesia, might be classified under the three heads of di-

minished, increased, and perverted motion; *i.e.*, hypokinesia, hyperkinesia, and parakinesia. Such a classification has been adopted by Mandl, and I formerly followed the same. But more experience has convinced me that while the cases of laryngeal hypokinesia constitute paresis and paralysis (designating for convenience by the latter term entire loss of motion, and by the former incomplete loss, but comprehending both conditions under the general term paralysis), the cases of laryngeal hyperkinesia and parakinesia cannot properly be clinically separated, or rather that morbidly increased motion in the larynx is perverted motion; *i.e.*, that all the conditions of disordered mobility not of the nature of "paralysis" can properly be classed under the head of "spasm."

I. *Paralysis.*—This may be confined to a single muscle, or may implicate several muscles, or one or more sets of muscles. It may be in the domain of either the superior or the inferior laryngeal nerve, or may involve both, and come from disease or injury of either the pneumogastric or spinal accessory nerve, or the brain: in either case it may be bilateral or unilateral, and either partial or complete. In affections of the brain the paralysis is usually not limited to the larynx, but is associated with paralysis of the pharynx, palate, tongue, etc., as in progressive bulbar paralysis, locomotor ataxy, and general paralysis. We have more than once in this Polyclinic had the opportunity to observe the very curious fact that if in injury or disease of either the brain, or the pneumogastric, spinal accessory, or recurrent nerves, laryngeal paralysis is or becomes incomplete, the abductor filaments are more prone to be affected than the adductor filaments, and that if, in a case in which both the abductors and the adductors are affected, recovery takes place, the adductors are apt to recover first or exclusively, and to be affected with abnormal contraction, so that the patient during the progress of recovery is in danger of a dyspnœa, which may necessitate tracheotomy to prevent death. The relatively greater disposition to implication of the abductor filaments has been impressed upon the profession by Dr. Felix Semon, of London.

Paralysis in the domain of the superior laryngeal nerve involves, aside from anæsthesia, loss of power of the thyro-cricoid and the thyro- (and ary-) epiglottic muscles, while paralysis in the domain of the inferior laryngeal nerve implies either adductor or abductor paralysis, or both combined. A few years ago, I pointed out as a difference between the position of the vocal bands to which we may justly apply the term *cadaveric* (uninfluenced by muscular action) and the position which results when all the muscles except those innervated by the superior laryngeal nerves are paralyzed, that in the latter case the edges of the bands are slightly concave, while in the dead body, where the real cadaveric position is seen, and in paralysis involving the thyro-cricoid, thyro-arytenoid, arytenoid, and lateral crico-arytenoid, either with or without the posterior crico-arytenoid muscles, these edges are straight or even somewhat convex. I should much like to have other observers pay attention to this point, as it as yet lacks confirmation.

In the domain of the inferior laryngeal nerve, the adductor paralysis, causing phonatory leakage, involves, either singly or combinedly, paralysis of the arytenoid, thyro-arytenoid, and lateral crico-arytenoid; while the abductor paralysis, causing respiratory insufficiency, involves paralysis of the posterior crico-arytenoid. Paralysis of the lateral crico-arytenoid muscles is very rarely isolated; usually there is combined with it paralysis of either the arytenoid or the thyro-arytenoid, or both; sometimes the two latter are affected and the former are intact, or either of the latter may be affected alone. Paralysis of the posterior crico-arytenoid muscle occurs either alone or in combination with the adductors.

II. *Spasm.*—Paralysis of laryngeal muscles sometimes is followed by, or alternates with, spasm of the same or other muscles, and sometimes it seems to cause, or at all events is accompanied by, spasm of antagonistic muscles. Sometimes spasm is a reflex effect, and sometimes it is called forth by the very action of the muscles. It is either more or less *clonic* or more or less *tonic*, in the former the muscular fibres contracting and relaxing alternately in quick succession, in the latter the contractions remaining for a comparatively long time. It may be unilateral, but usually is bilateral, and is either simple or complicated with spasm of other muscles. It may affect either the abductors or, what is more usual, the adductors, and in this case

may either involve all or be limited to one or two of the adductor muscles. Hack has pointed out that isolated spasm of the lateral crico arytenoid muscles is more dangerous to life than spasm of all the adductors combined; and I have met with cases which entirely confirm Hack's experience.

For many years I grouped cases of laryngeal spasm according to a modification of Gerhardt's classification. This thorough clinician made the following four groups:

1. Those caused by direct irritation of laryngeal nerves.

2. Reflex laryngeal spasms, mostly arising from excitation of the superior laryngeal nerve, as when the mucous membrane, especially the lower face of the vocal bands, is touched, when foreign bodies are present in the air-passages, etc.

3. Hysterical laryngeal spasms, which are also reflex, and sometimes combine with spasm of the inspiratory and expiratory muscles.

4. Functional laryngeal spasms, analogous to writer's cramp, shoemaker's cramp, etc.

As my observations accumulated, I found Gerhardt's classification, and successive modifications thereof, inadequate. I had to enlarge especially the frame of functional spasms; under this designation Gerhardt had recorded two very interesting cases of "neurosis of occupation." In describing his second case, Gerhardt says, "This was evidently a case of spasm of an organ abnormally exercised, occurring at every attempt at over-exertion." I found cases in which laryngeal adductor spasm was evoked not only by the exercise of the function of phonation, but also by that of the functions of respiration and deglutition; and while in some cases over-exertion was necessary to bring on the attack, in others the quietest and most unexcited functional action of the larynx produced it. I therefore came to arrange these cases under the heads of deglutitory, inspiratory, and expiratory (including phonatory) adductor spasm. In addition to the simple forms of these four, special mention must be made of the complicated inspiratory and expiratory forms of adductor spasm; the former is that ordinarily known as laryngismus stridulus, the latter occasions very curious coughs. These coughs have been subdivided (*a*) as to their mode into the two kinds, paroxysmal and continuing, and (*b*) as to their acoustic quality, which is often very peculiar, as barking quacking, crowing, lowing, etc.

In abductor spasm there is insufficient closure of the rima glottidis, and of course no possibility of making a laryngeal sound.

NOTE.—Since delivering the foregoing lecture, I have presented the subject of laryngeal spasm to the American Laryngological Association; and a reviewer in the *Internationales Centralblatt für Laryngologie, Rhinologie und verwandte Wissenschaften*, criticising my classification from a report published unofficially and without my knowledge in the *Philadelphia Medical News*, regards it as very artificial, and based more upon theoretical considerations than upon observations at the sick-bed: "stark gekünstelt und mehr auf theoretischen Erörterungen, als auf Beobachtungen am Krankenbett beruhend."

It is to be hoped that with more experience this evidently young reviewer will learn better. Before concluding his review he gives evidence, also, of carelessness, not to use a harsher word,—viz.: any one with understanding of the subject, or even without understanding, with attention to the context, would have known that the phrase "*spasm of all the abductor laryngeal muscles*" is a reporter's or a typographical error, especially as that phrase occurs in speaking of a variety of adductor spasm; but, according to this reviewer, the phrase *must be interpreted as showing a mistake in regard to the number of abductors of the vocal bands proceeding from false anatomical notions!*

The esteemed editor of the *Internationales Centralblatt*, if he wants to maintain a high standard for his periodical, must be more careful in the selection of his reviewer.

## ORIGINAL COMMUNICATIONS.

### REPORT ON THE PROGRESS OF OTOLOGY.

BY CHARLES H. BURNETT, M.D.,
Philadelphia.

#### *HÆMATOMA AURIS.*

UNDER this title, Dr. Samuel Sexton (*N. Y. Med. Record*, July 5, August 2, 9, and 16, 1884) has written the most elaborate essay on othæmatoma in the English language. In the author's opinion, othæmatoma, or sanguineous tumor of the auricle, may be produced either by severe contusion of the auricle, or it may, as is asserted, take its origin from idiopathic causes alone. Most frequently, however, the author thinks that it is due to violence, even where a predisposition to its occurrence exists. The size of the tumor varies from that of a Lima bean to that of an egg. Its formation is usually rapid, and the sanguineous contents of the tumor, at first fluid, show a marked tendency to become clotted, and quite often, unless incised, spontaneous rupture takes place. The disease most frequently occurs in the insane. The etiology of othæmatoma in the insane has long been the subject of discussion. Bird (1834) was at a loss to account for it, and Franz Fischer (1848) concluded that the causes must ultimately be sought for in pathological states of the nervous system. Dr. Sex-

ton believes that the intense congestion of the ears sometimes witnessed in connection with great cerebral excitement in the insane cannot but suggest the possibility of spontaneous extravasation of blood beneath the perichondrium. It is also held to be probable that certain tissue-changes in the perichondrium and cartilage may induce othæmatoma. These tissue-changes seem to be mainly brought about through the agency of the nervous system, although many authorities lay much stress on the influence of blood-dyscrasias in producing changes in the blood-vessels of the auricle. The author, however, holds that the "weight of evidence leads to the conclusion that they most frequently depend on a morbid state of the brain, especially on congestion of the organ." He also advances Robertson's idea that functional disturbance of the brain, or of its cerebro-spinal system, giving rise to disorder of the cervical sympathetic, may, by reason of the dominance thus exercised on the vessel-regulating nerves distributed to both intracranial ganglia and the auricle, set up hyperæmia in the former and vascular changes in the latter.

When othæmatoma occurs in the course of general paralysis, it would seem that auricular congestion took place in consequence of the general degeneration of the sympathetic; and it has been suggested by Bonnet that in inflammation of the brain the aural disease becomes advantageous to the patient, since the hemorrhage is thus spent upon the posterior auriculars, coming from the middle meningeal artery. "Other impressions propagated by morbid processes in other organs through the sympathetic nervous system are worthy of consideration: thus, in the examination of insane subjects having this affection, the almost universal prevalence of nasal catarrhs, diseased teeth, and (in the female) of uterine disease is notable, and it is well known that the irritation due to these influences is transmitted through the nerves, and may not only exasperate cerebral disease itself, but is liable to also affect the organ of hearing." The predisponents believed to have an important relation to othæmatoma are as follows: age (as it does not occur before adolescence), insanity, intemperance, cachexia, sex (the male being more liable than the female), and traumatic influences.

All forms of mental disease seem to be predisposing, but the conditions most favorable to othæmatoma are present in acute dementia where long-standing vaso-motor disturbances are followed by paroxysms of excitement.

Women are said to enjoy considerable immunity from the general paralysis of the insane, and consequently to escape the frequent paroxysms of excitement which characterize this phase of mental disease. On the other hand, women are subject to a monthly aggravation of symptoms during the menstrual period, since the mentally sane, even, are more irascible and nervous at this time. The treatment of female lunatics, moreover, is more gentle than that of males, since their attendants are usually of their own sex, and less liable than male nurses to injure in handling violent or idiotic patients. The ears of female lunatics are somewhat protected by their hair and head-dressings.

In the mentally sane, the affection is most commonly met with among prize-fighters, gymnasts, persons given to violent sports, and among drunken and disorderly persons, where blows and falls are frequent. "From a careful study of the subject, the author has come to believe that othæmatoma is almost always due to violence inflicted upon the auricle. Asylum superintendents, however, have been, on the whole, perhaps rather disposed to undervalue the importance of mechanical causes, since it might be construed to imply undue restraint or rudeness in the management of their patients. It is highly probable that violent patients injure their own ears in various ways, and even those who are not violent, but suffering from hallucinations of hearing, undoubtedly injure their auricles by picking at and pulling them in order to gain relief from subjective sounds, pruritus, etc."

The more frequent occurrence of othæmatoma in the left auricle of the insane has been the subject of much speculation. It has been suggested that the near position of the left carotid artery to the heart affords a more direct supply of blood to the left ear, and that, furthermore, the left pinna is more likely to be pulled by others, as it is most convenient to the right hand of the attacking party. It is also supposed that the left auricle is more likely to be pressed in forcible feeding. Dr. Sexton, however, thinks an explanation of the greater frequency of left-sided othæma-

toma must be sought in some other direction, since the above apply only to mechanical agencies. It has occurred to him "that probably some vaso-motor influence might be found to lie at the bottom of the difficulty." It is a fact that unilateral sweating about the head is not an uncommon occurrence, also the left ear is more rapidly invaded in bilateral chronic catarrh,—a condition, Dr. Sexton thinks, due in all probability to some vaso-motor disturbance whereby the nutritive process is interfered with much more on the left side than on the right side. While the agency may be found to lie in some cerebral or cerebro-spinal condition, there exists a prominent irregularity in the distribution of the sympathetic nerves which, it occurs to the author, might bring about such a result. Reference is made in this connection to the peculiar arrangement of the nerves extending upward from the cardiac plexus to the two sides of the head. There is here an important irregularity. Thus, while an unvarying connection is maintained with the right side through the superior cervical ganglion, a comparatively imperfect and varying connection exists on the *left* side, the left superior cardiac nerve and the inferior cardiac branch of the pneumogastric only occasionally affording communication between the cardiac plexus and the left superior cervical ganglion. It is held that this asymmetrical distribution above described might be the means of diminishing the vaso-motor dominance in respect to the circulation in the left ear, and thus lead, by disparity of vascularity in the two ears, to distinguishing nutritive changes in the tissue of the two ears, changes which are well marked in chronic catarrhal otitis media, in which the left membrana tympani is frequently found parchment-like while the right membrane is normal, and which are also seen, as the author believes, in the nutritive disturbances in the cartilage of the left auricle in othæmatoma. Othæmatoma does occur simultaneously in both auricles, which form of invasion is "suggestive of centric nervous origin."

No distinction is made between othæmatoma and the so-called "idiopathic" perichondritis of the auricle, since in all cases of othæmatoma, perichondritis is never absent. A peculiar form of othæmatoma is mentioned as occurring in the insane, which is probably due to protracted and violent rubbing of the auricle. "Any portion of the perichondrium may be involved, but it is usually limited to a small space. Thickening is often scarcely observable, and to the feel it is not 'doughy.' The deep-seated nature of the inflamed or congested region, however, may be discovered by stretching out the auricle between the observer's eye and a strong light. The effusion is not sufficient to form a tumor: such cases seem to present the characteristics of the first stage of othæmatoma." The author then describes a case he has recently observed.

*Treatment.*—It is laid down as a safe rule not to be in haste to interfere unless rupture of the sac be imminent, since in a certain number of cases a manifest tendency to spontaneous recovery exists. It must also be remembered that, whatever the supposed cause or causes, we are dealing with a perichondritis, "in the treatment of which we should be guided rather by its character than its causes." And, furthermore, one should be guarded against the strong tendency to operate and interfere in these cases. Whenever these tumors have been treated like abscesses, by incision, poulticing, and stimulating lotions, the results have been almost invariably unfavorable, since gangrene, carious destruction of the cartilage, and, not rarely, death has been the end. (Dr. Wallis, 1884.)

Wallis then fell back on nutritious diet, mild cathartics, and local applications of lead-water, treating the affection like *noli me tangere*. This treatment continued for weeks was successful in a number of cases. Fisher and Marcé pursued purely an expectant plan of treatment. Sexton declares othæmatoma to have an aggressive and regressive period. In the former the observer is seldom offered a chance of observing the incipient symptoms. Usually a tumor is found to exist, and the surgeon is called in to limit its extension if possible.

"If it is found that the serous or serosanguinolent exudation is not active, and that the quantity already present is not great, we may prescribe rest for the patient, and administer small and frequently-repeated doses of the tincture of aconite-root, with a view to arrest the activity of the circulation about the head. Locally the affected region, and beyond even, may be enveloped with a coating of collodion,

the gentle and uniform pressure produced by its contraction acting as a compress, and thus promoting absorption."

In resorting to methods to increase absorption, care must be exercised lest they increase unduly the local irritation. When the tumor is large and contains a considerable clot, it is best to incise it and cause the contents of the sac to escape. To prevent refilling, a seton is recommended. As the secretion lessens, its removal will be best accomplished by aspiration. Adhesive inflammation is much better accomplished by massage than by the old method of irritation by a seton.

*GUMMA OF THE AURICLE.*

Partial necrosis of the cartilage of the auricle, as a consequence of an ulcerating gummatous tumor of that part of the ear, is extremely rare, if we are to depend upon the testimony of medical literature. Hessler, of Halle, however, reports the occurrence of a case in 1881, in the *Archiv für Ohrenheilkunde*, Bd. xx., part i., 1884.

The patient exhibited an ulceration in the concavity of the concha of the right ear. This spot, after suppurating for some days, healed spontaneously. Before the suppuration occurred, the auricle became swollen and enlarged, bluish red, and burning, and so painful that the patient could not lie on that ear and sleep. At the first inspection of the ear, the auricle, besides this bluish-red, swollen, and shining appearance, was double the size of the left auricle and stood out almost at a right angle from the side of the head. The furrow in the skin behind the auricle had entirely disappeared, and the skin of the mastoid was swollen and tight. The skin in front of and below the ear was also swollen and very sensitive to the touch.

Upon the anthelix and in front of its division into the crura furcata there was a sore about three millimetres in diameter, the edges and surface of which were yellow and moist, and which discharged a serous matter, yellow and thick.

The auditory canal was uniformly contracted throughout its entire extent, but a small speculum could be introduced and the membrana tympani thus inspected. The latter appeared normal; the hearing was unaffected.

At first sight the affection was very naturally supposed to be syphilitic; but a further examination failed to confirm this opinion, as the rest of the body manifested no trace of syphilitic taint. The patient confessed that, four years before, he had had an ulceration of the penis, in conjunction with gonorrhœa, but said that this had been promptly healed by internal medication and local treatment, without any secondary manifestations. He had not observed at any time since any trace of cutaneous eruption, nor any affection of the mucous membrane of the fauces. In the absence of any trace of syphilis, it was not deemed advisable to establish a specific treatment, especially since medical literature has not presented any case of gummous tumor of the auricle without simultaneous symptoms of syphilis elsewhere on the body. Hence the treatment of the inflammation was limited to the application of compresses of cold lead-water (*eau blanche*). Subsequently the ulcer was cauterized every fifth day with lapis infernalis. The swelling and the sore soon diminished, but the latter did not cicatrize. Some days later the patient returned, with his ear in the condition of the first visit, excepting that the sore was larger and more extended. A second course of treatment, supplemented by incisions in the anterior part of the auricle and injections of a three-per-cent. solution of carbolic acid, with further cauterization by means of lapis infernalis, failed to have any effect. Nor did a course of baths prove beneficial, since the patient returned home worse than when he went away.

After six months of treatment, there finally appeared on the right tibia an enlargement the size of a German mark, rounded and hard to the touch, painless, and completely detached from the bone. No cause could be assigned for its appearance, and it soon became apparent that it must be referred to a syphilitic origin. A course of treatment by iodide of potassium caused both the affection on the tibia and on the auricle to disappear.

It was learned subsequently that, two years before, this patient had been treated for some time, and without success, by a system of bandages, for an enlargement of the joints of the hands, which, however, had not been attributed to syphilis; and, finally, he had been successfully treated for a gummous orchitis by means of iodide of potassium. The syphilitic cause of his auricular disease now remained no longer doubtful.

The case is remarkable by the fact that the aural affection was isolated from all other symptoms or traces of syphilis, and appeared as a tertiary symptom of the disease. This furnishes a demonstration in favor of the specific character of new local formations in persons affected by syphilis, and shows the necessity of treating them, like the original disease, by means of a strictly specific medication.

(To be continued.)

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## THE ACTION OF THE SULPHATE OF QUINIA ON THE BLOOD.

BY HOBART A. HARE, M.D.

WHILE it is generally agreed that quinia instantly stops the migration of the white blood-corpuscle on the stage of the microscope, it has been argued by many that the drug does not prevent its migration in the body.

For the purpose of coming to some definite conclusion in regard to what the action of the drug really was, I carried on four series of experiments, using twelve Cohnheim frogs in each series.

In order to provoke migration, I used the point of a hot needle, which was applied and instantly withdrawn.

As all results would be negative unless the blood-vessels observed were of the same general size in every case, I never watched an arteriole over three millimetres or less than one and one-half millimetres in diameter, the average diameter of the vessels being in all four series two and a fraction millimetres.

In the first series I counted the migration from the vessels when there was no inflammation and no drug present. I found that in twelve frogs the migration in thirty minutes only averaged three.

In the next series, in which I caused inflammation in the manner stated, I found that in twelve frogs the migration in thirty minutes averaged twenty-nine.

In the third series, to which I gave ten grains of the quinia hypodermically, the migration averaged 1.4 in thirty minutes.

In the fourth series, where I caused inflammation and gave ten grains of quinia hypodermically, the migration did not take place at all in five of the frogs, two corpuscles migrated from two of the frogs, and from the other five only one migrated in thirty minutes, so that the average was virtually none at all.

These series would prove that the corpuscles are stopped in their migratory movements by the drug, at any rate in regard to passing through the wall of the blood-vessel.

Whether the drug does this by a direct action on the corpuscle or not is another question.

To discover in what way the drug stopped the migration,—that is, whether the corpuscle itself was influenced, or whether the blood-vessel wall was acted on,—I instituted the following observations:

Causing inflammation and administering the drug, I noticed that the corpuscles stopped at the irritated point and congregated, but did not pass through the wall as they did when there was no drug but simply inflammation present; and *this* difference existed, viz., that where inflammation was alone present the walls were dilated and therefore thinner, but where the drug was present also the walls were contracted. This contraction could not only be seen by the eye, but was marked by the use of the eye-piece micrometer.

To cause this contraction the drug must act either on the vaso-motor system or the muscular coat of the blood-vessel wall.

In order to see if the contraction of the blood-vessels was due to centric vaso-motor stimulation, I made a section of a frog's spinal cord high up and found the contraction was still present, and in another frog, to whom quinia was given after section was made, the contraction took place. This proves that the action is not centric. The only remaining action which it could have is on the peripheral vaso-motors or the muscular fibres in the vessel walls. According to Prof. H. C. Wood, atropia in toxic doses probably paralyzes the muscular coat. I therefore gave a frog one-sixtieth of a grain of atropia, and saw an arteriole dilate, thus proving one-sixtieth of a grain of atropia to be a toxic dose to the frog. Another frog was taken, inflammation caused, quinia given, then atropia, and the contraction caused by the quinia remained. This would seem to prove peripheral stimulation; but this is not at all tenable, for if atropia paralyzes the muscular fibres, the stimulated peripheral endings could not cause contraction.

The only explanation seems to be that

the quinia acted on the fibres themselves to such an extent that it antagonized the atropia.

My observations in regard to the effect which section of the cord would have on vaso-motor contraction are directly opposed to those of Jerusalimsky, who asserts that the contraction is not present after section is made. Schroff found that in the cinchonized animal neither galvanization of a sensory nerve nor asphyxia produced contraction, claiming with Jerusalimsky that there was paralysis of the whole vaso-motor system, as I understand them. Heubach found *no* paralyzant action of this kind when he used galvanization of a sensory nerve. To prove, then, that quinia has no paralyzant action of this kind, I took a frog and strapped him to the frog-plate by placing a very strong and tense rubber band over the windpipe, and in order to prevent his using his skin as a means of respiration I allowed it to become dry. On examining his mesentery, I found no paralysis present at all, and the arterioles evidently very much contracted, as if by the action of the stimulated vaso-motors combined with a direct action of the drug on the muscular coat. It therefore seems proven to me that the drug does not paralyze the vaso-motors either peripherally or centrally, and probably has no action on them at all, unless it be *perhaps* very slight stimulation, which I doubt, any contraction of the vessel being due to the action of the drug on the muscular coat. It seems to be decided that quinia does also decrease heart-power, as nearly all observers agree in this respect,—that is, in toxic doses.

I shall consider therefore proven,—

1st. That the sulphate of quinia does not cause paralysis of the vaso-motors.

2d. That the contraction, when the sulphate was administered during inflammation, was produced by a direct action on the muscular coat of the blood-vessel, and was independent of any vaso-motor action.

3d. That the drug does prevent the migration of the white blood-corpuscle in the body, particularly when inflammation is present.

4th. That this stoppage of migration is due not to any action on the corpuscle itself, but to the contraction of the muscular coat and the decreased heart-power. Because if you have a dilated vessel you must have a thin wall, and if you have a strong heart you have both the *vis a tergo* of the circulation and also the decreased resistance of the wall in so thin a state, and consequently the corpuscles migrate readily.

If you give a drug which causes both decrease in that heart-power and contraction of that inflamed blood-vessel, you no longer have that *vis a tergo* so strong, nor the doors of migration so wide open. Briquet, A. Eulenberg, and Schlockow have all shown that large doses of quinia depress the heart and cause its stoppage in diastole. In two frogs' hearts which I immersed in a solution of quinia I also got stoppage in a very short time in diastole. It seems rather difficult to reconcile the two facts that quinia should have such a depressant action on the heart-muscle, which, though striated, is virtually involuntary, and yet seem to have a stimulative action on the non-striated muscular fibres in the blood-vessel walls. No explanation can be offered of this other than there being some depressing action on the heart's contained ganglia.

Bonour, Arvedi, Baldwin, Melier, Monneret, and Magendie state that the blood after death from toxic doses of quinia is dark, defibrinated, and non-coagulable. Briquet, on the other hand, states that it is not as the others state, but just the contrary.

Taking three rabbits, I gave them three different doses respectively, as follows: to the first, one hundred and twenty grains, hypodermically; to the second, one hundred grains; and to the third, seventy-five grains.

In every case the blood clotted very rapidly and firmly in the vessel it was caught in, and there was a clot in the soft, flabby heart.

It may be well to state that the temperature of the surrounding atmosphere during the observation of the frog's mesentery was never allowed to vary more than five degrees Fahr. The observations were always made at the same time of day, and the frog was thrown away after his mesentery had been exposed thirty minutes, as diapedesis was set up after that time by the abnormal exposure of the parts. The water used to keep the mesentery clean was of uniform temperature also. The rabbits were young and healthy, and were kept in a room of good size, with plenty of food, light, and air.

## OLEATE OF ACONITIA IN OPHTHALMIC PRACTICE.

BY ALBERT G. HEYL, M.D.,

Ophthalmic Surgeon to the Episcopal Hospital.

I DESIRE in this paper to place on record some clinical experience in connection with the use of oleate of aconitia in ophthalmic practice. The preparation used contained two per cent. of the alkaloid. It was generally applied to the skin of the upper lid, over a surface equal to the area of a ten-cent piece. The effect was local. About an hour after the application, a sensation of heat would be experienced; then profuse lachrymation would occur, the tears escaping freely through the nostril of the same side. The effect lasted for a varying period of time. Generally several hours would elapse before the effect ceased. I have, however, known it to subside in an hour. The following cases will give illustration of its therapeutic action:

*Case I.*—A Swedish sailor, who, about a week before his arrival at this port, noticed something wrong with his R. E., on the arrival of the vessel came under my care at the Episcopal Hospital. The L. E. was normal. The iris of the R. E. widely dilated, the power of accommodation annulled, but distant vision good. The patient was a vigorous man of 30 years of age, without any evidence of general disease. There was a history of a slight urethritis. The pupil was very easily influenced by eserine: even a solution of $\frac{1}{30}$ grain to f$\bar{3}$j would temporarily contract the pupil, and with a stronger solution the ability to see a few inches from the eye could be brought about. As soon, however, as the remedy was suspended, the eye would return to its previous state. There was a seething sound in the right ear, evidently depending on the same cause as the eye-trouble; also neuralgic pains over the right half of the head, with tenderness on pressure over the supra-orbital foramen. Optic nerve looked a little whiter than normal; the retinal veins seemed to be abnormally large, while the arteries were of normal calibre. The small venules running into the retinal veins were visible, but corresponding arterioles were absent. Fowler's solution in small doses was given, but was followed by the occurrence of a simple continued fever. The arsenic was stopped, and under appropriate treatment the fever subsided. After a proper interval, the arsenic was again given, with a recurrence of the febrile disturbance. Evidently there was either an idiosyncrasy in this phenomenon or the abnormal state which gave rise to the eye-trouble was the cause of it. The tinct. aconit. rad. was given, and apparently through it the accommodation partly returned, the patient being enabled to read Jaeger 11 at about ten inches. No further progress seemed to be made, and the oleate of aconitia was employed. The effect was as follows: I saw him about two hours after the application. There was profuse lachrymation, pupil perhaps slightly contracted. An hour later, lachrymation still continues, pupil is contracted not circularly, but is heart-shaped. Iris is injected. Superficial conjunctival vessels, perhaps veins, are injected. The large subconjunctival veins corresponding to the horizontal and vertical meridians were also injected. The eye did not seem sensitive to light; there was a good deal of winking, presumably due to the tears. No change was induced in the accommodation.

Cases of this kind are well known clinically, although their pathology is obscure. In my opinion, this was not a case of paralysis of the iris and ciliary muscle, except perhaps in a very restricted sense. It is true that both loss of accommodation and dilatation of the iris existed, but by the use of eserine they could be brought back. The fifth pair of nerves probably stood in some causal relation to the eye-trouble. It is noteworthy that, while slight, irregular contraction of the iris was induced by the aconitia, no change in the accommodation was observed. On the other hand, the internal use of the tincture of aconite seemed to be followed by considerable improvement in the accommodative power.

*Case II.*—W. G., æt. 34. Sent to me by Dr. F. L. Haynes. This patient had been struck on the L. E., sixteen hours previous to my seeing him, by a flying bar of hot iron. Atropia had been instilled and hydrate of chloral given internally. When I saw the patient there was intense pain about the eye. A superficial eschar about three-fourths of an inch long by one-sixteenth broad existed in the skin of the upper eyelid; the latter was purple from venous engorgement. The media were cloudy. By reflecting the light into the eye, a number of dark lines were seen, probably due to wrinkling of the anterior capsule. The retinal arteries were very tortuous. R. E. could not be examined satisfactorily at this time. A day or two later this was examined again, and the same arterial tortuosity observed as in the L. E. Pressure on the left supra-orbital nerve induced a sensation like that of a foreign body rolling in the eye. Morphiæ sulph., gr. $\frac{1}{4}$, internally, night and morning, was ordered, and also the oleate of aconitia to be applied in the neighborhood of the eye. In a few days there was complete

relief of the pain, and the patient was discharged.

*Case III.*—Miss B. came to my office February 1, 1884, with the following history. Within a few days the skin about the left orbit had been cut by pieces of broken window-glass. The wounds had healed, leaving two small scars, about on a level with the infra-orbital ridge. The eye was very sensitive to light, although not injected. The retinal arteries in each eye showed the tortuosity common in cases of so-called irritable retina. Pressure on the scars would cause the lids instantly to close. The patient further suffered from false projection: that is to say, in looking with the left eye at an object near at hand, it would appear much farther away from the patient than it really was. This I suppose was due to some defect in the process of accommodation. Both internal treatment and local applications of chloroform-liniment about the eye were ordered. A weak solution of eserine was also applied. No material relief was thus obtained. The oleate of aconitia was then applied to the scars, with the effect of both relieving the patient and at the same time seeming to cause the cicatrices to disappear.

In both of these cases there was undoubtedly lesion of the peripheral ends of the fifth pair. Some doubt may be raised as to the effect of the aconitia in relieving Case II., as morphia was given at the same time. My impression, however, at the time was that the aconitia was really the efficient agent. Case III. was less open to doubt: here was a patient whose trouble was beyond a doubt caused by the cicatrices in the skin, under observation for months, treated with slight effect by various remedies, and finally relieved by the local use of the aconitia. This case seems to point to this conclusion,—viz., that in abnormal conditions of the fifth, depending on lesions of the peripheral ends, as from scars in the skin, etc., the aconitia will do good.

There are certain cases of ciliary neuralgia which are relievable, in my experience, with the oleate of aconitia, and perhaps the true explanation of such cases is found in a peripheral lesion of the fifth, although invisible to the naked eye.

Graefe's classical case of cure of blepharospasm by section of the supra-orbital nerve is well known, and may be studied in connection with the above cases. In this case the exciting cause was a blow from a missile apparently inducing such change in the peripheral nerve-filaments as to set up reflex spasm. There are, however, cases of ocular pain which are not reached by the aconitia. Thus, a patient who suffered with great ocular pain and great intolerance of light, and in whose eyes decided pigmentary change in the outer layer of the retina was observed, received no benefit from the aconitia. The fifth pair was involved in some way in this case, but the aconitia seemed to produce no effect.

1535 Pine Street.

## TRANSLATIONS.

The Effects of Bromoform, Bromethyl, and Bromethyline.—Bonome and Mazza, from a series of physiological experiments recently conducted in the laboratory of Prof. P. Albertoni, in the university at Genoa, obtained the following results: 1. *Bromoform* is a general anæsthetic. Dogs and guinea-pigs almost always show the same symptoms of anæsthesia and muscular relaxation, following inhalation, that the human subject does. In five experiments upon men, three were well narcotized, lasting even for a whole hour; in two (probably on account of the use of a defective preparation containing free bromine) there was no narcosis, but, on the contrary, irritation of the conjunctivæ, a flow of tears, burning in the eyes, etc. The narcotic action they believe to be a little slower in appearing than when chloroform or ether is used, but the success is apparently the same as with both of these valuable anæsthetics.

2. The narcosis obtained from the inhalation of bromoform is free from the stage of exaltation which we are called upon to witness during chloroform-administration. On this account preference should be given this agent in case the patient is subject to epilepsy or alcoholism. Billroth and Nussbaum have each directed attention to the danger of exciting attacks in epileptics by the use of chloroform. This does not occur during the use of bromoform, which allays the irritability of the cerebral cortex.

3. Bromoform does not disturb the respiratory function, but after prolonged narcosis there is a slight reduction of the blood-pressure. The respiratory fluctuations of the blood-pressure in the course of the narcosis are very regular; the pulse remains strong. In none of the dogs which

inhaled it did the bromoform cause sudden arrest of the heart's action, such as is seen during the use of chloroform.

4. During the bromoform narcosis, while it was noticed in dogs that there was decided mydriasis, in man there occurred only trifling alterations of the pupil; there was neither nausea nor vomiting. The quantity of bromoform required to produce complete narcosis is less than that of chloroform as it is commonly used.

5. In the first few hours after narcosis, it was noticed that there was a sinking of the temperature exactly as after chloroform; but the patient appeared to recover sooner from its effects.

6. Given by the mouth, bromoform also acts as a hypnotic and anæsthetic.

7. Moreover, bromoform prevents putrefaction in organic substances (urine and meat); bacteria are not developed in the presence of bromoform.

8. Injected under the skin, bromoform is fatal when given in a dose of 0.15 gm. for every 100 gm. of the bodily weight.

*Ethyl bromide* produces narcosis more quickly than chloroform or bromoform, but is more easily eliminated from the system, and, on this account, its effects are more temporary. It is to be recommended for short operations. It is less active than bromoform, and becomes poisonous at a point of each 0.17 gm. for 100 gm. of the bodily weight. Whilst the narcosis reduces the blood-pressure (20–30 mm.) at first, it rapidly increases again after the termination of the narcosis, when the respiration also is accelerated. Bromide of ethyl also reduces the irritability of the cerebral cortex, and likewise hinders the development of bacteria in organic infusions.

*Ethylene bromide* does not produce complete narcosis upon inhalation, but, when pushed, causes fatal results by abolishing the cardiac activity.—*Centralblatt für Chirurgie*, No. 36, September 6.

Counter-Prescribing in France.—An interesting case has just been adjudicated in Rouen. The law forbidding grocers to deal in pharmaceutical products, Eustache, a grocer of St.-Étienne, was arrested for selling castor oil at retail. The court decided—not very logically, it would seem—that, castor oil not being a pharmaceutical product, grocers might sell it; but, at the same time, they must sell it in commercial quantities and not in medicinal doses. Inasmuch as the unfortunate grocer acknowledged playing the rôle of the pharmacist, he was found guilty and compelled to pay five hundred francs fine.—*La France Médicale.*

Hysterectomy for Uterine Cancer.—In a recent discussion of the treatment of carcinoma uteri by extirpation of the uterus, before the Academy of Surgery, most of the surgeons agreed with the opinion expressed by Verneuil and Polaillon, that "hysterectomy would be a very good operation at the beginning of cancer, if it were less dangerous; but with the progress of surgery its dangers may be lessened. It is, therefore, an operation for the future; but under the present conditions, the mortality being one in three, the surgeon has not the right to resort to it, because fortunate results from it are far from being frequent."—*Bull. Gén. de Thérapeutique*, September 15.

Treatment of Eczema of the Scalp.—M. Doyon recommends the following in infantile eczema of the head:

℞ Acidi salicylici, 1 gr.;
Tincturæ benzoini, 2 gr.;
Olei petrolei, 50 gr. M.

When a firmer preparation is needed, having a more drying effect, he uses the following in preference:

℞ Acidi salicylici, 2 gr.;
Olei petrolei, 50 gr.;
Zinci oxidi,
Amidon, āā 25 gr. M.

To be applied to the excoriated surfaces and retained with a compress of wadding. It need not be disturbed for several days unless the secretion is free, in which case it is to be changed daily.

Effects of Removal of the Thyroid Gland.—Dr. Zesas claims (*Wiener Med. Wochenschrift*) that the thyroid gland is supplementary to the spleen in its hæmatopoietic functions, and that its removal is followed by an excess of white corpuscles in the blood. From experiments upon animals the statement is made that removal of both thyroid gland and spleen invariably causes death. It is also said that thyroidectomy is followed by nervous disorders, without actual paralysis, but with sluggish movements, fibrillary contractions, tremor, and even tetanus. Zesas therefore denounces the operation as an unjustifiable one.

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## EDITORIAL.

### TEA AND COFFEE.

THE physiology of food is always interesting, especially when therapeutic applications are suggested. In the *Ephemeris* for September, Dr. Squibb communicates the results of some recent analyses of tea and coffee, which are worthy of note. Without discussing the method of analysis pursued by the experimenter, we will give some of his results. The following varieties of tea, obtained from wholesale dealers, were assayed in order to ascertain the best variety for use in making a standard fluid extract for medical use.

A fancy, high-flavored Formosa Oolong, eighty-five cents per pound, contained 3.10 per cent. of caffeine.

Extra fine small leaf gunpowder, sixty-five cents per pound, contained 3.51 per cent. of caffeine.

Formosa Oolong, fifty-five cents per pound, contained 2.80 per cent. of caffeine.

Formosa Oolong, forty-five cents per pound, contained 2.74 per cent. of caffeine.

Basket-fired Japan, forty-four cents per pound, contained 2.80 per cent. of caffeine.

Basket-fired Japan, forty cents per pound, contained 2.87 per cent. of caffeine.

Amoy Oolong, large leaf, twenty-five cents per pound, contained 2.95 per cent. of caffeine.

Congo, large, coarse leaf, North China, twenty cents per pound, contained 2.41 per cent. of caffeine.

This series embraces representatives of the tea market from the very highest to the very lowest prices and qualities. Teas sold below twenty cents per pound are said to be mere dust or refuse from better grades, or imitations of tea made from other plants.

It will be first noticed that the yield of caffeine does not vary as much as might be expected, and really varies comparatively little; and, next, that the disparity between the caffeine value and the money value is very great. The two values bear only a general relation, which is much confused by exceptions. The highest-priced tea does not contain the most caffeine; while the next to the lowest in price ranks third in the proportion of caffeine. The lowest-priced tea of all contains within .7 per cent. of caffeine of the highest.

This result showed that some other element than caffeine gives value to tea, probably the aroma or flavor, although from a medical stand-point the yield of the alkaloid is probably the best measure of the value yet reached. It was concluded that the extra gunpowder tea was the best source of a fluid extract for therapeutic use, because it yields about one-fifth more caffeine than the basket-fired Japan, which would be the next choice. The standard strength of the fluid extract of camellia recommended is that yielding 3.5 per cent. of the alkaloid, the adult dose being fifty minims, or a small teaspoonful. It is best given in ice-water. From a long course of physiological testings, it was determined that there was, beyond a sense of well-being and a general toxic effect, no influence upon secretions or excretions, and especially no after depressing effect, observed from either tea or coffee. It does not appear whether an estimation of the daily excretion of urea, or nitrogen, was made or not; it is not probable, however, that the well-known physiological effects of tea and coffee in reducing the excretion of urea (established by Lehmann) are referred to in making this statement, but merely the general action upon quantity and appearances of the secretions.

With coffee a similar assay was made of the principal kinds obtainable in the market, as follows:

Mocha, an Arabian coffee, twenty-three cents per pound, yielding 1.05 per cent. of caffeine.

Mocha, seventeen cents per pound, yielding 1.07 per cent. of caffeine.

Mandheling Java, twenty-three cents per pound, yielding 1.30 per cent. of caffeine.

Mandheling Java, twenty-three cents per pound, yielding 1.22 per cent. of caffeine.

Interior Java, seventeen cents per pound, yielding 1.10 per cent. of caffeine.

Maracaibo, eleven cents per pound, yielding 1.20 per cent. of caffeine.

Rio, strong and rank, eleven cents per pound, yielding 1.00 per cent. of caffeine.

Rio, ten cents per pound, yielding 1.05 per cent. of caffeine.

Dr. Squibb remarks that the same disparity between market value and yield of caffeine is observed here as in the case of tea, but the caffeine value is much more uniform than in tea. The difference between the extremes is here only .3 per cent., while in tea it is 1.1 per cent., the tea yielding on the average less than two and a half times the amount of caffeine.

The value of the aroma in coffee is fully considered, but, curiously enough, no part is given to the aromatic oil in estimating the strength or therapeutical effects of the coffee. Comparing effects to determine their relative therapeutic value, the fluid extract of roasted coffee made like that of camellia was found to contain 1.68 grains of caffeine in each two drachms, which was equivalent in physiological effect to three grains of pure caffeine, or to one hundred and eighty minims of fluid extract of coca, to seventy minims of fluid extract of tea, to sixty minims of fluid extract of guarana, or to one hundred and fifty minims of fluid extract of green coffee. The adult dose would be about forty minims, equivalent to one grain of caffeine, to be gradually pushed to its full physiological effects. A cup of good Java coffee was found to contain 2.78 grains of caffeine, which was found to be in effect equivalent to five grains of pure caffeine, or nearly double the single maximum dose of the German Pharmacopœia. So that in some the dose above given may be considerably increased; and this would undoubtedly be the case were the person accustomed to the use of tea or coffee as a beverage.

## PROFESSOR WILLIAM OSLER.

THE election of William Osler, M.D., of Montreal, Canada, by the trustees of the University of Pennsylvania to the chair of Clinical Medicine in the faculty of that institution, on the 7th instant, is a well-merited compliment to him and a substantial recognition of the merits of a rising man. Dr. Osler, having pursued his medical studies at the McGill College, Montreal, and at the Toronto School of Medicine, received the degree of M.D. in 1872, and subsequently he attended lectures at the University College, London, and in Berlin and Vienna. In 1874, upon his return from Europe, he was chosen to fill the chair of Institutes of Medicine in McGill College, and subsequently was appointed Pathologist to the Montreal General Hospital and Lecturer on Clinical Medicine in the summer session. He is a Fellow of the Royal College of Physicians of London, and President of the Canada Medical Association. His contributions to medical literature, though not voluminous, are characterized by originality and scholarship, and have already won for him enviable distinction. We tender Dr. Osler a hearty welcome, and assure him that he will find in Philadelphia many friends who already know him by reputation, and who will cordially greet him as he enters upon his new duties among them.

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WE regret to hear that, on the day after Prof. Mallet came to Philadelphia, most of his household goods were destroyed in the burning of a storage-warehouse. We hope, however, that this will prove a good omen, as we recall the fact that the late Prof. Gross met with a similar loss shortly after his arrival, and he subsequently remained here for life.

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HENRY C. LEFFMANN, M.D., has just been elected Demonstrator of Chemistry at the Jefferson Medical College.

## LEADING ARTICLES.

### PECULIARITIES OF CONFORMATION IN THE SKULLS OF CRIMINALS.

DR. JOHANN BADIK, a disciple of Benedikt's, has during the past ten years occupied himself with the question of the anomalies of the skulls and brains of criminals. His investigations have been conducted in the great Hungarian prison at Illava, of which he is the physician, and the results are published in a recent number of *Virchow's Archiv*. At Illava are imprisoned all offenders in Hungary sentenced to terms exceeding ten years, in number more than six hundred, and including those convicted of theft, burglary, murder, arson, counterfeiting, and the like. Truly a fine field for studies of this kind.

The investigations have been directed especially to the skulls and to the anomalies of function of the central and peripheral nervous systems. As regards the skulls of criminals, he found as highly characteristic,—1, flattening posteriorly, with low position of the external occipital protuberance; 2, asymmetry, and, 3, in consequence of this, a difference in the size and position of the foramina transmitting the blood-vessels. The anomalies of function of the nervous system, central and peripheral, consisted of a progressive series of exaltation- and still more of depression-states, as well of the intellectual life as of the activity of the nervous system, with all their resulting phenomena.

The lesions of the brain and its coverings, as found post mortem in some sixty or seventy cases, consisted of scattered areas of translucency in the calvarium; in a few cases local adhesions between the dura and the arachnoid, the latter presenting a gray appearance, through which showed the dilated blood-vessels of the pia. In the arachnoidea and pia, and in the sulci, was collected an opaque fluid of the consistence of glycerin. Upon puncture of the arachnoidea this fluid escapes slowly from the subjacent sulcus, but not from the sulci immediately adjacent,—a sign that the membranes are adherent to the summits of the convolutions. The pia, grayish in color, cannot be detached from the brain without injury to the latter, and shows, besides dilated blood-vessels, many scarcely noticeable adhesions, which extend into the sulci, and by uniting the contiguous parts of the gray matter tend to obliterate the furrows. The gray substance is less deep, but of a firmer consistence, than normal. The white substance shows no gross abnormality. The ventricles contained in only one instance an increased quantity of fluid.

Dr. Badik classifies criminals into four typical groups, a division based upon the association of certain mental and moral qualities with definite abnormalities in the skull and corresponding lesions in the brain and its coverings. From the anatomical stand-point these groups arrange themselves into two classes: 1, those with symmetrical skulls; 2, those with asymmetrical skulls. There are then under

#### I. SYMMETRICAL SKULLS.

A. *The small (undeveloped) skull, without pathological changes, either in the brain, which is correspondingly small, or in its membranes.*—That the possessors of these brains are simple-minded persons, concerning whose lack of mental development and of intellectual capacity there could be no question, is obvious. They are, as a rule, good-natured inmates of the institution, who can be employed only at the most indifferent occupations, uneducated and incapable of education. Consequently they depart from prison, after having served out their term of punishment, in the same mental condition as that in which they entered it. They are not in a position to understand either the gravity or the consequences of their offences, and they are equally indifferent to their punishment. They are usually great feeders. Unable to comprehend the importance and results of evil deeds, and having no idea of morality, religion, or law, they commit crime in pure simplicity, or as the tool or associate of other miscreants. Their want of moral perception leads them ever to the commission of new offences when permitted to go at large.

B. *Skulls of medium development, with the above-described lesions of the brain and its membranes.*—To this group belongs a considerable but by no means the largest number of offenders. Its members are intellectually more developed, and comprehend the nature and consequences of their crimes. Their behavior in prison is, as a rule, good. They endure their

punishment with patience, occasion little trouble, and afford no bad example to their fellow-prisoners. As a rule, these individuals leave the prison improved mentally and morally, and are practically never recommitted for further offences. They suffer much from neuroses of the vascular system, complain much of headache and dizziness. The abnormality of the nervous system expresses itself in the motor sphere in two ways: they either display great strength or they cannot be induced to work, alleging the most varied pretexts as the cause of their laziness. Their crimes have been usually committed in states of intense emotion, by reason of jealousy, hunger, in the defence of their rights and possessions, revenge, or in vindication of their outraged honor, etc.

II. ASYMMETRICAL SKULLS.

Here the corresponding lateral parts are unlike in position and size.

C. *The brain and its membranes show no pathological changes.*

The majority of the inmates of the prison present this skull-malformation.

Of the gravity of their crime, which is usually great, they have little idea. Their thoughts are usually occupied with evil, and their deeds are correspondingly bad. They are liars, slanderers, swindlers, scamps, and withal trifling and shameless. There is no evil that they are incapable of planning and committing. They are usually leaders in crime, who urge on and instruct others, and also who stir up discontent, revolt, frays, and combats, who slander and bear false witness against their associates. They feel no repentance for past misdeeds, and by themselves or with their fellows are ready forthwith to rob, murder, or destroy, as may suit their purposes, without remorse, to commit villanies that are neither explicable nor comprehensible.

These are criminals who are benefited neither by instruction, nor by counsel, nor by religion, nor by punishment, who end the vicissitudes of a checkered career in prison.

D. *Asymmetrical skull, with pathological changes in the brain and its coverings.*—The character of criminals of this type depends wholly upon the lesions of the central nervous system. When the pathological changes are slight, the condition is analogous to that of criminals referred to C; when they are more advanced, not only are vascular neuroses present, but also epilepsy in its various forms. In truth, it is among criminals of this class that epilepsy in its most varied and terrible forms is seen. These are prisoners whose crimes have been committed for the most part (if not indeed always) in a state of perverted consciousness and are remembered only as a dream. The mental condition, always feeble, sinks at middle life into imbecility, and they are often paralytic. Anything like education is in these cases obviously out of the question. These criminals reach towards and often transcend the border-line between crime and insanity. The proportion of the four types at Illava was—A, 1; B, 3; C, 9; D, 0.5.

The criminal classes have claims upon society that are as yet imperfectly recognized. Self-interest joins with the highest motives in urging the close and searching investigation of the causes of crime from all points of view. These studies of Dr. Badik's, and others like them, will receive attention more widely than they will be at present accepted, especially in their more remote bearings. But we believe that it is by such investigations that the means will be found to reclaim many criminals, to proportionately diminish crime, and thus to benefit society at large. Neither the criminal class nor any other class stands wholly apart and antagonistic to society. The evil and the good form society, and betterment can only come by knowledge.

J. C. WILSON.

## NOTES FROM SPECIAL CORRESPONDENTS.

### SIAMESE THEORY AND PRACTICE OF MEDICINE.

ALL nature, according to the Siamese, is composed of four elements,—namely, earth, water, fire, and wind. The human body is supposed to be made up of these same elements, which are divided into two classes, visible and invisible. To the former belongs everything that can be seen, as the bones, flesh, blood, etc.; to the latter, the wind and the fire. The body is composed of twenty kinds of earth, twelve kinds of water, six kinds of wind, and four kinds of fire.

The varieties of wind are as follows: the first kind passes from the head to the feet, and the second variety from the feet to the head; the third variety circulates in the ar-

teries, forming the pulse; the fourth variety resides in the abdomen outside of the intestines; the fifth resides in the intestines, and the sixth enters the lungs in the act of inspiration.

The four kinds of fire are: first, that which gives the body its natural temperature; second, that which causes a higher temperature, as after exercise or in fevers; the third variety causes digestion, and the fourth causes old age.

The Siamese divide the body into thirty-two parts, as the skin, heart, lungs, etc. The body is thought to be subject to ninety-six diseases, due to disarrangement of the earth, wind, fire, and water. An undue proportion of fire causes fevers, and dropsies are caused by too great a proportion of water. Earth is supposed to produce disease by invisible and impalpable mists and vapors, and wind can cause all manner of complaints. Nine out of every ten natives, when asked what is the matter with them, will answer, "Wind." (Not long ago, on our way to Bangkok, we found a man dead upon the river-bank. The boatmen were speculating as to the cause of the man's death; but the oldest man in the company soon settled the matter by gravely remarking that, in all probability, it was due to wind.) It is thought that the external elements are constantly acting upon the elements composing the body, causing health or disease. Thus, in the hot season, the Siamese believe, we are more liable to fevers, and in the rainy season to dropsies, due to too great an absorption of water. Spirits are also supposed to have great power over our bodies, deranging the elements and thus producing all manner of maladies. One of our young men remarked not long ago, while travelling in a rather lonely portion of country, "I am not afraid of tigers, but I do fear spirits." The Siamese have numerous spirit-doctors, and many are the propitiatory offerings made to the immaterial beings that fill the air.

In the time of Buddha lived one still worshipped as the Father of Medicine. To him, it is said, the plants all spoke, telling their names and medical properties: these were written in books, and have become sacred. If they fail to produce the results ascribed to them, the fault is never theirs, but is due entirely to want of merit in either doctor or patient. The natives use almost everything as medicine; the bones and skins of various animals occupy a large part of their pharmacopœia, while the galls of snakes, tigers, lizards, etc., are among the most valuable of their medicines. Most of the Siamese remedies are very complicated, being composed of scores of different ingredients. The following is an absurd recipe for snake-bite: A portion of the jaw of a wild hog, a portion of the jaw of a tame hog, a portion of the jaw of a goat, a portion of goose-bone, a portion of peacock-bone, a portion of the tail of a fish, a portion of the head of a venomous snake: these, being duly compounded, form a popular remedy when the venom has caused lockjaw. Burnt human bones, powdered and mixed with an equal portion of powdered alum, form a favorite medicine for sprinkling on ulcers. The eye-teeth of tigers, bears, lions, and various other animals (the more the better), ground up together, form the most popular remedy for fevers. The ashes of earthworms and human hair, mixed with cocoanut-oil, is frequently used for cuts. Every native physician has an image of Pra Ruse, the father of arts, in his house. All drugs are first placed in this idol's hand and receive his blessing; afterwards they are taken to the patient's house and boiled in earthen pots, a wicker-work star always being placed above and below the drugs, to prevent the spirits from tampering with them. In all fevers the doctor fills his mouth with some concoction and squirts it over the naked body of the patient in a fine spray, exactly as the Chinese laundry-men sprinkle clothes.

Dissection is never practised among the Siamese, consequently they are grossly ignorant in regard to the science of anatomy. The writer has not unfrequently seen them hew a body in pieces with a cleaver at least two feet long, but very little is ever learned from these rough post-mortem examinations. They are usually made with the expectation of finding one or more tumors in the abdominal cavity, which they suppose to be the work of witchcraft. They usually are successful in finding what they look for. Sometimes the spleen, at other times a kidney or some other normal organ, is mistaken for an abnormal growth inserted in the body by superhuman agency. The functions of the different organs are not at all understood. In the heart is supposed to be a cavity about the size of an almond. This cavity is thought to be filled with a fluid which changes its color and consistency with our passions. When we are calm and peaceful, this fluid is perfectly clear, like water; when we are angry, it is turbid; when very angry, it turns dark; and when we are in love, it is red. In stupid persons the apex of the heart is rounded, while in those possessing the usual amount of wisdom it is pointed. It is not known that the heart has anything to do with the circulation.

E. A. STURGE, M.D.

PETCHABURI, SIAM, June 2, 1884.

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DRS. GRESSIN AND BOTARD, of Havre (*Union Médicale*), have made the interesting discovery that in the weever, or sting-fish (*Trachinus draco*, Linn.), and perch (*Trachinus vipera*), there is at the base of the dorsal spines a cul-de-sac which contains a gland secreting a poison. Injections of this glandular secretion into frogs, fish, birds, etc., caused pain, spasm, clonic convulsions, collapse, and death.

## PROCEEDINGS OF SOCIETIES.

### AMERICAN GYNÆCOLOGICAL SOCIETY.

THE Ninth Annual Meeting of the American Gynæcological Society was held in the city of Chicago, Illinois, at the Palmer House, on Tuesday, Wednesday, and Thursday, September 30, and October 1 and 2. Dr. Albert H. Smith, President of the Society, and Dr. William H. Byford, Vice-President, occupied the chair. The weather was favorable, and the sessions were well attended. The following-named members of the Society answered the roll-call: William H. Baker, M.D., Boston; Bernard Browne, M.D., Baltimore; William H. Byford, M.D., Chicago; Alexander Dunlap, M.D., Springfield; George J. Engelmann, M.D., St. Louis; Frank P. Foster, M.D., New York; William T. Howard, M.D., Baltimore; A. Reeves Jackson, M.D., Chicago; E. W. Jenks, M.D., Detroit; Joseph Taber Johnson, M.D., Washington; Richard B. Maury, M.D., Memphis; Paul F. Mundé, M.D., New York; C. D. Palmer, M.D., Cincinnati; Thad. S. Reamy, M.D., Cincinnati; John C. Reeve, M.D., Dayton; William L. Richardson, M.D., Boston; Edward Warren Sawyer, M.D., Chicago; John Scott, M.D., San Francisco; A. H. Smith, M.D., Philadelphia; T. Gaillard Thomas, M.D., New York; Ely Van de Warker, M.D., Syracuse; H. P. C. Wilson, M.D., Baltimore.

At various times during the meeting the following-named gentlemen were invited by vote to take part in the proceedings, and were made Members by Invitation: Dr. E. C. Dudley, Dr. W. E. Clarke, Dr. T. P. Seeley, Dr. N. S. Davis, Dr. Liston H. Montgomery, Dr. Ralph E. Starkweather, Dr. A. H. Burr, and Dr. George H. Randell, all of Chicago; Dr. P. McClure, of Dubuque, Iowa; Dr. Henry G. Dearborn, of Nashua, New Hampshire; Dr. J. H. Carstens, of Detroit; Dr. T. B. Harvey, of Indianapolis; Dr. Fritz Netzler, of Stockholm, Sweden; Dr. Frank Woodbury, of Philadelphia; Dr. Wesley M. Carpenter, of New York; Dr. W. H. Myers, of Fort Wayne, Indiana; Dr. J. H. Rauch, of Springfield, Illinois; Dr. J. K. Bartlett and Dr. William Fox, of Milwaukee; and Dr. T. A. Roger, of Montreal.

An ADDRESS OF WELCOME was delivered by Dr. WM. H. BYFORD, of Chicago.

#### THE PRESIDENT'S ADDRESS.

Dr. ALBERT H. SMITH, of Philadelphia, on Thursday morning, delivered the President's Annual Address, taking for his theme

#### THE PRESENT ASPECT OF THE PUERPERAL DISEASES.

After referring briefly to the benefits conferred by this Society upon the general field of medicine, not only by its actual work accomplished, as shown by its published Transactions, but also by the deeply-felt influence exerted upon the profession and upon the specialists in its several included lines of work, he passed to a consideration of the advanced condition of gynæcology, and to the comprehensive character of its labors, contributing, as it does, experimental knowledge, manipulative skill, and diagnostic accuracy, which are utilized in other departments of the art of medicine. Surgery especially is indebted to the labors of gynæcologists for extending by new operations its field of usefulness, for many ingenious instruments, and for the introduction of new methods of treatment which have added greatly to the means of the successful treatment of disease and injury. In abdominal surgery, the gynæcologist has had, from the beginning of its history, absolute control of the field, so far as the mass of work, the attainment of success, and the teachings through the medium of published results are concerned. Beginning with the surgery of the reproductive organs of woman at the pelvic brim, he has gradually been put in charge of all intra-abdominal diseases requiring surgical interference, without regard to sex or organ, and the operator who has established a reputation in ovariotomies and hysterectomies is now sought out for man, woman, or child upon whom an abdominal section offers the least hope of relief. Cases suggesting nephrectomy, nephrotomy, carcinomatous obstructions, invaginations, hydatids of the liver, cholecystotomy, all seek relief from the gynæcologist rather than the general surgeon. He himself had seen a man about to be discharged from the Woman's Hospital, Birmingham, having been successfully operated upon by Mr. Lawson Tait for biliary obstruction. Where, indeed, he asked, in the whole realm of general surgery can a claim be presented of statistics showing the barest approach to the actual life-saving operations or operations for restoration to usefulness of the maimed and helpless, as in the little domain of gynæcology?

The high standing of gynæcology and its services in the past invest the laborers in this department with special responsibility. He inquired whether or not the gynæcologists of America are sustaining their reputation by original work, by a high standard of literature, by maintaining an elevated tone in their department of medicine. He particularly urged upon the members of the Gynæcological Society attention to these important matters. He had been humiliated by the remark made last year by some transatlantic brethren, that a lowering of moral tone was observable in this country in the press and in the amphitheatre, and almost entirely in the productions of gynæcological writers and teachers. "We find in our best conducted journals articles devoted to subjects connected with the sexual relations, entering into minutiæ upon matters of no scientific value, and without special interest in themselves,

and rendered valueless, at any rate, by the character of the media of information through which these asserted facts are derived,—articles which can have no effect but to minister to a prurient and depraved taste, from which the members of our noble profession should be absolutely free. We find also articles coming from the pens of specialists in obstetrics and gynæcology attempting professedly to be moral homilies upon the family relation, based mainly upon the most exceptional extremes of married life, often the product of a morbid imagination in the writer, and being in themselves not only devoid of scientific bearing, but full of gross indecencies vulgarly told, and utterly unfit for the perusal of any class of readers."

Regarding this as one of the evidences of failure in earnestness for fair, honest work, he begged the Fellows of the Society to use all their influence to stop the flow of this foul current, which lowers the standard of purity of thought and befouls the sacred profession of medicine. There can be no fact in true science which cannot be fully developed by a man of pure mind without a shock to the most delicate: true science is embarrassed, not aided, by anything coarse or indecent.

The main subject of the address being the zymotic diseases, the speaker referred to the historical discussion which had taken place last year between Drs. Thomas and Barker, at the New York Academy of Medicine, upon "Puerperal Fever," and said that these two representative men might be considered as the exponents of two hypotheses as to the etiology of the disease, the one holding to "absorption" and the other to "essentiality," and, of course, advocating different methods of treatment based upon these views. In order to discuss the subject intelligently, he formulated the following definition of puerperal fever:

Puerperal fever is "a febrile condition occurring in a woman from two to four days after the termination of pregnancy, either at full term or prematurely, characterized by typhous symptoms, high temperature, and frequent pulse, the rapid formation of local centres of inflammation, suppuration and gangrene, metastatic abscesses, emboli, a violently phlogogenous condition of the blood, and, unless arrested, running on rapidly to disorganization and death." He believed that this definition would be accepted as based upon Dr. Barker's clinical reports of his cases, and yet meeting the demands of his most decided opponents. He then proceeded to consider the actual condition of the woman after delivery, which, if physiological, still is one which is easily converted into a pathological state from the results of traumatism combined with the hyperinosis of the blood and its tendency to determination to the pelvis.

After a review of the doctrine of the essentialists, he declared himself unable to accept the distinctions so carefully drawn by Dr. Barker in his work between the clinical cases of the disease, but saw in Dr. Barker's teachings an argument against crowding and hospitalism, and in favor of prophylactic measures.

Braxton Hicks attributes the puerperal-fever poisoning either to some modification of the scarlatinal or other exanthematous virus through the lungs, and its development after delivery, and, more recently, Dr. Kirkhead, of Galway, has advanced the idea of the interchangeability of all zymotic diseases into puerperal fever, which, after absorption, instead of reproducing themselves, appear with the characters of puerperal fever. As he could not conceive of such a change of type, he passed it without discussion.

He then took up the theories of the "absorptionists," (1) according to Semmelweiss (1847), who regards puerperal fever as a surgical fever, due to traumatism and septic purulent infection, or (2) according to Pasteur (1872), who attributes it to specific micro-organisms: in the words of Paul Bar, "No microbes, no puerperal infection." After a thorough consideration and comparison of these two schools of "absorptionists," a review of the phenomena presented by typical cases of the disease, and its pathological anatomy, he expressed his conviction that the teachings of Semmelweiss were more nearly conformable to the facts than those involving the specific germ, but still, in his own language, expressed a willingness, "when any one by repeated experiment proves the exact nature of the *causa morbi* present in every case, and never found except under conditions of similar character, then I will accept the *corpus delicti*, even if it be Pasteur's diplococcus and *microbes en chapelet*, and honor him the more for his pertinacity in maintaining his ground." In the same position as himself stand our principal English and American teachers,—Playfair, Leishman, Simpson, Goodell, Howard, Chadwick, Engelmann, and, less positively, Dr. Thomas and Dr. Barnes.

He then proceeded to an exposition of the recent teachings of the specific-germ theorists, and concluded that their claims had not yet been substantiated by actual demonstration. Criticising the statement of Pasteur that a germ cannot enter a healthy body, the blood is "firmly closed" against it, he asked, very pertinently, how can it then be a pre-existing cause of disease in that body? and declared that the woman is already infected who gets microbes into her circulation. That microbes are found in the lochia of every parturient woman no competent observer will deny, but he claimed that "every form that is found in the blood in the most virulent cases is found in the vagina of a healthy woman who remains healthy." He did not, however, wish to be understood as considering

these microbes as harmless: they may be carriers of infection, and they may obstruct the vascular spaces mechanically. He protested, however, against confining our attention to the microscopic examinations of the lochial discharges, when they should be given to the general condition of the patient. As to treatment, he advocated the methods endorsed by experience, rather than the new methods based upon antiseptic theories. He avoids overcrowding, and insists upon strict cleanliness and the use of vaginal douches of carbolized water, or, preferably, good fresh Labarraque's solution, or of hot water, 115° F., with mercuric bichloride 1 to 1000. He had no fear of intra-uterine injections, and always used them where there are any clots in the uterus or there is undue patulousness of the os uteri. There should be no air in the syringe to pass into the veins, and if there is a proper provision for the return of the fluid none of it will penetrate the oviducts. He has never seen any alarming symptoms after its use, and, on the contrary, praises it highly for its antiseptic effects and recommends it to his classes.

He also exhibited several glass tubes for intra-uterine irrigation. Each tube was about fifteen inches in length, closed at one end, the calibre being about two-thirds of an inch. The rounded end of the tube was perforated by a number of holes, for the escape of the fluid from the uterine cavity, which was to be injected through a soft-rubber catheter passing along the interior of the tube and through a terminal aperture. The glass tube could be made perfectly aseptic, while the rubber tube should be renewed each time it is used. He had employed such tubes, extemporaneously made, in his practice with satisfaction.

### SCIENTIFIC PAPERS AND DISCUSSIONS.

Dr. JOHN C. REEVE, of Dayton, Ohio, read the first paper presented before the Society at the meeting on Tuesday morning, entitled

### MOOT POINTS IN REGARD TO INVERSION OF THE UTERUS.

The progress of our knowledge with regard to inversion of the uterus, he said, had been very slow, chiefly, it was believed, on account of the rarity of its occurrence. Its infrequency may be judged from the fact that West did not meet with a single case in a total of one hundred and forty thousand labors; moreover, they happen mostly in the hands of midwives and unskilled observers, or of young practitioners, and under circumstances not favorable to careful observation. This also constitutes the stronger reason why their conditions have not been better studied. The accident was known to and described by the ancients. With regard to the etiology of inversion, some progress has recently been made, and it is now better understood than formerly. It was the custom to attribute the condition always to ignorance, and unskilled manipulations, of the midwife in delivering the placenta; now it is known that it may be due to muscular action of the uterus, without any aid on the part of the accoucheur whatever. Can inversion of the uterus occur entirely independently of pregnancy or of polypus in the nulliparous organ? It is generally supposed to be due to some change in the wall or the contents of the uterus. Pregnancy and polypus undoubtedly favor its development; but the question is, whether or not there are other conditions which may also be the cause. Hydrometra has been assigned as a predisposing cause by Courty, and one case apparently due to hydatids has been reported. It is admitted that with a healthy condition of the uterus this accident is impossible. Its occurrence independently of pregnancy is also accepted by Courty, Madame Boivin, and other distinguished authorities; by others, however, the inversion of the nulliparous uterus has been doubted, and it is denied by Matthews Duncan, West, and others. The chief objection of Matthews Duncan is that the wall of the uterus is too thick and muscular in virgins,—that it cannot be depressed or dimpled so as to admit of inversion. But this really begs the question, because it applies to the normal condition only; and the possibility of its occurrence, on the contrary, can be proved from the writings of Dr. Duncan himself. He has described changes which he has frequently encountered in the virgin uterus, where there has occurred a thinning of the walls as a result of pathological conditions where the walls were very much reduced. This condition—abnormal, it is true—is certainly favorable to the development of inversion, and it is not unfrequently found after operations for the removal of intra-uterine growths. He quoted three cases in support of this view. The first was reported by Baudelocque in 1790, the patient being fifteen years of age, which established the occurrence of inversion of the nulliparous organ. Case II. was reported by Beyer, in a woman aged forty-four years, and the third case was published recently by Gaillard Thomas. This case occurred in the practice of the late Dr. Wiliard Parker. The woman had had several children, and was supposed to have polypus; but upon removal of the tumor it was found to be the inverted uterus. The patient recovered.

Thus there are fair arguments in favor of inversion occurring in the absence of pregnancy and polypus, due to abnormal conditions of the nulliparous uterus.

The second question he propounded was with regard to the starting-point of the inversion: does it always begin at the fundus? This appears to be the generally accepted view; but may it not occur in a reverse way, from the cervix being relaxed and open and the organ gradually everting? Dr. Thomas claims that this has not been proved, and it

has been denied at a meeting of this Society by Dr. Taylor. A case was quoted from Klob, but upon referring to the original it seems that Klob referred to Tyler Smith.

He had not been able to find it in the published writings of Tyler Smith, but Dr. John H. Tate, of Ohio, who was a student and great admirer of Tyler Smith, had referred to it in a paper on this subject, and probably learned it from him. The process is very much like that which occurs in prolapse of the bowel,—a hollow organ rolling outward through its inferior outlet owing to pressure from above.

Dr. Tate, in his paper, communicated the notes of three cases which did not fit into any of the prevailing doctrines whatever. A case has also been recently met with by Dr. Araminta V. Scott, of Philadelphia, and reported by her, so that there seems to be sufficient evidence to support the proposition that inversion may begin at the cervix.

The third query he propounded was, Does puerperal inversion of the uterus occur except at the time of delivery or immediately afterwards? This question is an important one, because it affects the responsibility of the accoucheur. Suppose a woman has been attended through the usual course and has been dismissed as well, and some few days afterwards, while sitting up, perhaps straining at stool, she feels something give way, and an examination reveals an inverted uterus. The question is, did this begin at the time of labor, and was it overlooked by the attendant, or was it an after-occurrence? When inversion, partial or complete, occurs at the time of labor, the usual symptoms of inversion, hemorrhage and nervous shock, should be present to direct attention to the accident; and repeated hemorrhages within the first few days after confinement should suggest this possibility to a young physician, who is to blame if he neglect a vaginal examination, when the condition would at once be recognized. He recalled a case occurring twenty-five years ago in his own practice. Mrs. M. complained of pain in her side during her labor, which was rather a difficult one. After delivery, the uterus could be felt, as usual, above the pubes. On the fourth day she seemed to be doing well, on the tenth she was discharged. On the eighteenth day he was sent for on account of her having had some fresh hemorrhages; he found an inversion of the uterus, which he reduced three months after delivery. He regarded this as a case in which the inversion did not occur at the time of labor, but some time afterwards. The next case was reported by Dr. Delamater, from the practice of Dr. Sayles. It was a second labor. Apparently nothing unusual occurred, as the doctor was only called to remove the placenta, after doing which there was pretty free hemorrhage, which, as she had had hemorrhages before, did not excite apprehension. The uterus was in good position. For several days a catheter was used, but otherwise everything appeared to be normal until the tenth day, when the patient experienced an irresistible tendency to bear down, and, as the result, a tumor protruded from the vagina, which was recognized as the inverted uterus, and which was afterwards successfully reduced. In Case III. it was a twin labor; the patient was apparently well until the eighth day. On the next day she had a tumor like the preceding one, which was found to be an inverted uterus. Case IV., having been doing well, on the eighth day got out of bed to evacuate the bowels. A tumor protruded from the vagina, which was recognized as the uterus nine months afterwards and successfully reduced. In Case V. the inversion occurred on the fourth day; in Case VI., with the first labor inversion occurred, and again in the second and third labors; the uterus was in good position on the sixth day, but afterwards inversion occurred, which was subsequently reduced. Case VII. also had an inversion, occurring on the ninth day, the patient having been doing well up to this time. This was also successfully reduced.

With regard to the predisposing causes of inversion, it is observed that relaxation of the uterus after delivery is very common, and inversion under such circumstances is not only possible, but probable.

May it occur without giving rise to symptoms that would indicate that something was wrong? In most cases the shock, paleness, profuse hemorrhages, indicate to the friends that everything is not right, and in seventy-eight out of one hundred and twenty-eight cases a fatal termination occurred in a few hours. Two cases were quoted in which the patient seemed comfortable and there was no excessive bleeding. In one the uterus and its contents were forced out between the labia by one severe pain; the placenta was peeled off, the uterus restored to its position, ergot given to retain it in place, and the patient seemed to suffer no inconvenience.

The last difficulty to consider is one of diagnosis. Sessile polypi and inverted uterus might be confounded; the history of the two conditions is of no aid whatever in diagnosticating them, as they are so nearly alike. The only safe rule is to bear in mind that such a tumor may be an inverted uterus, and to use appropriate treatment after a careful examination.

### DISCUSSION.

Dr. SCOTT, of California, said that, in a long experience, he had had only two cases of inversion of the uterus. One occurred during the early years of practice, coming on during labor in a young woman; it was reduced very speedily by manipulation. The second case occurred only last year. She was brought to him from Sacramento to San Francisco, having been under the care of a

homœopathic medical man. She reported that the child was not unusually large, and the labor was an ordinary one, but the doctor seemed in a great hurry to get away the placenta, which came away suddenly, with a gush of blood; during the next three weeks there were repeated hemorrhages. Her medical attendant recognized the case as one of inversion of the uterus, and tried, though unsuccessfully, to reduce it, and another irregular made the same diagnosis, but did not attempt its reduction. The remarkable feature in the case is that this patient had for the next seven months inversion of the uterus without hemorrhages, although she had pain in the back and most profuse leucorrhœa. In the eighth month she weaned her baby, and the hemorrhages immediately began again. The speaker examined her and restored the inversion in about twenty minutes by the usual method, by manipulation, first indenting one cornua, then the other, and gradually pressing the fundus through the cervix. In the process he could feel the muscular fibres yielding; some of them were torn. After the uterus had been restored, he examined it from day to day, and found that the os remained patulous; there was no tendency to contraction; the patient felt perfectly well. Iodine was applied for three weeks without much effect; then the menstrual period came on, followed by hemorrhage, continuing for ten days. An examination showed the uterus in place, but the cervix dilated as before. Applications were again made, but after the next period it was found that nothing had been gained. He then retrenched the calibre of the cervical canal by putting in some silver-wire sutures, which set up a cellulitis. The patient afterwards recovered, became pregnant, was delivered of a child, and he was called upon to operate for a rupture of the perineum. He reported it in order to call attention to the persistent patulous condition of the cervix.

Dr. WILLIAM H. BYFORD said that the paper merits more notice than it could receive in a short discussion. The main points for discussion are the method of inversion of the uterus, its causes, and the times when it is likely to occur. With this accident he had not had much experience personally, although in consultation he had seen nine or ten cases, two or three being acute. Some years ago he had published a case, which occurred in 1870 in his own practice, of a very healthy young Jewish lady of this city, at her second confinement. The labor was not a marked one in any respect, and there were no untoward symptoms. He followed his usual custom after labor, and examined the uterus through the abdominal walls. He found it in good position, not altered in shape, and certainly not in position. There was no hemorrhage, and, in fact, no symptoms to indicate anything extraordinary. He could recall no circumstance afterwards during her confinement in bed to excite suspicion. Four or five weeks after her confinement he went to California, and was absent two months. Two or three weeks before his return, this patient had to call in another physician of this city to see her, who, upon examination, found an inverted uterus: there was complete inversion. He was astonished and perplexed to hear of this, and to think that he possibly might have overlooked a complete inversion. Now, it is noteworthy that, from the time of her labor to the time that this physician was called to attend her for a slight hemorrhage, there had been nothing to point to anything unusual. This patient had been nursing her child, also, until about two weeks before the occurrence of this accident. Owing to some sickness on the part of the child, the nursing was interrupted, and the hemorrhage began. It often is the case that pelvic disorders first make their appearance by symptoms after weaning the child.

In reply to a question, he said that such an occurrence had been the ground of a trial about twenty-five years ago. Dr. Fisher attended a case, and had in consultation with him Drs. Davis, McVicker, and others. The patient subsequently was found to have inversion of the uterus, which the husband attributed to unskilful attendance. Being an irascible man, he pursued Dr. Fisher, and tried to ruin his reputation, on account of his supposed neglect. Dr. Fisher sued him for damages for defamation of character, but did not gain the case. The affair ruined Dr. Fisher in Chicago.

Dr. BROWNE reported a case which was taken with hemorrhage on the ninth day after delivery, and inversion was discovered and put in place. In this case there was an ulcerated cervix, and probably the inversion had occurred from below. In cases where the uterus follows the placenta, the inversion is generally recognized at the time. We know how difficult it is to invert the uterus in cases of operation for removal of a sessile polypus; and in similar cases it seemed to him that the true explanation of the inversion is that it occurs from below.

Dr. DUNLAP referred to a case of chronic inversion of the uterus which had come under his care, with a history of hemorrhages after labor, but no abnormality of the uterus was discovered upon repeated examinations until some months afterwards. Then the os was seen to be in a state of dilatation, and through it the uterus slowly descended until the fundus was in the vagina. The point of this case consists in the fact that at first the os was closed, and several months afterwards, with obstinate hemorrhage, there was found dilatation of the cervix and descent of the fundus. In this case inversion occurred at the fundus, and not at the neck or the os.

Dr. SAWYER had a fatal case of puerperal

inversion to report. There had been extreme dilatation of the uterus by dropsy of the amnion. The uterus was flabby, and walls deficient in thickness. The fundus was above the umbilicus, and there was some difficulty experienced in delivering the placenta, although, after evacuation of its contents, the uterus appeared as if it were normal, except that the fundus was a little higher in the abdomen. The husband was asked to place his hand over the uterus while the relator changed some clothing: now a gush of blood was noticed, and a drachm of ergot was given. Upon taking the place of the husband, it was found that the uterus had disappeared. The time in which the dimpling and inversion had occurred was not more than ten minutes altogether. During the efforts at reduction, the organ became hardened, probably from the ergot, so that it was impossible to reduce it; the patient became collapsed, and died in three hours. At the post-mortem, a condition was found which throws some light upon the method of production of inversion. The area of placental attachment was near the right cornua; the uterine wall was large, and much thicker here than elsewhere. There can be no doubt that this portion of the fundus fell in from the force of gravity, and he was prevented from reducing it by the uterus being ergotized, ergot having been given to stop hemorrhage that was threatening life.

Dr. H. P. C. WILSON said that he had been most interested in the length of time which inversion had occurred after labor. Inversion never occurs at any time after confinement without the physician getting the blame for it. He had seen but one case in his life of acute inversion after labor. It occurred in the hands of a very distinguished practitioner, and was brought to the reporter six months later. It was reduced without special trouble. It would seem that everything which produces relaxation of the uterus or favors subinvolution, or anything which prevents the uterus from resuming its normal condition, may produce inversion at any time, as long as this condition remains, whether one week or ten after labor. Anything which causes relaxation of the muscular walls under these circumstances, such as over-exertion, may cause inversion.

Dr. HOWARD had seen only three cases. He was called to a fourth, but had not been able to attend it. In the first case, the midwife had delivered the placenta by pulling upon the cord, producing complete inversion of the uterus. The temperature of the woman when he saw her shortly afterwards was 103° F., pulse 120. The organ was replaced by manipulation, and the patient did not have a bad symptom afterwards. The second case was a young mulatto woman, who had been exhausted by repeated hemorrhages and leucorrhœa, due to polypi, which being removed with the écraseur without loss of blood, the uterus was found completely inverted. The attachment of the polypi was seen to be to the fundus by pedicles. The third case was also one of complete inversion, supposed to be a prolapse. She refused operation. The last case was one which he had seen about a year ago. She was sixty years of age, and had complete inversion with a polypus. In consideration of her age, no recommendation was deemed necessary.

In a case where a polypus was attached by a long pedicle to the fundus, he had inverted the uterus by delivering the tumor with the forceps, and immediately restored it again. Now, if the uterus can be inverted by traction and reduced immediately afterwards, it seemed reasonable to him to believe that in a woman who has never borne children the uterus may be inverted by the constant traction of a polypus. In conclusion, he referred to the discussion on this subject before the International Medical Congress held in Philadelphia in September, 1876, when Dr. Washington L. Atlee handed around a specimen of a portion of an inverted fundus uteri, which he had removed with the écraseur under the idea that it was a polypus.

Dr. H. P. C. WILSON, of Baltimore, read a communication on

### FOREIGN BODIES IN THE ABDOMEN AFTER LAPAROTOMY.

The possibility of allowing some of the instruments or a sponge to remain in the peritoneal cavity constitutes one of the great dangers of laparotomy; and this accident occurs more frequently than might be supposed from the records. The foreign body is sometimes discovered during life, sometimes only after death; sometimes it fails to be discovered at all. Unfortunately, most of the fatal cases have not been published, because they would do damage to the surgeon in the neighborhood in which he lives. Moreover, in a great many cases he is unable to obtain a post-mortem examination, and the diagnosis of septicæmia, peritonitis, etc., is usually considered sufficient, and it is never learned whether or not there may have been a sponge or a pair of forceps at the bottom of it.

Notwithstanding the difficulty of getting statistics of this accident, he had been able to get records of twenty-one cases, of which only five have been published; *i.e.*, more than two-thirds of the cases never come to light. Counting his own case, which he published to-day, there were six published. In five the foreign body was a sponge; in one, a pair of forceps. Four perished; two recovered, after timely removal of the sponge.

In his own case, when the wound was nearly closed, an assistant told him that a sponge was missing; but on counting them over, the nurse said that they were all accounted for. The patient made a good recovery, except that an abscess appeared on the anterior abdominal wall, which pointed

and discharged pieces of sponge six months later. The fact that the sponge had been thoroughly cleansed and asepticized probably saved the patient's life. He was entirely unable to account for its presence in the abdomen. In a case of Lawson Tait's, a bystander, becoming interested in the operation, assisted, and tore a sponge in two, and, without saying anything about it, he left the room before the sponges were counted. The number was correct, but the half-sponge left in the abdomen killed the woman. Spencer Wells reports a similar case, in which he was obliged to partially reopen the abdomen twelve hours later: he removed the sponge, and the woman did not seem any the worse for it. In another case, Spencer Wells, making some excuse, removed two stitches in order to find a pair of forceps, which were subsequently found rolled up in the mesentery. The patient got entirely well, and never found out anything about it. Carl Braun reports a case of a sponge, and Gustav Braun one in which a pair of forceps were allowed to remain.

In order to avoid such dangerous and disagreeable accidents, he urged that the number of sponges should be as limited as possible. The sponges should be selected on account of their strength, as well as their texture; they should not be too small, and should be whole, never cut or torn; they should not be used if old or friable. The instruments should also be large, because small ones might be overlooked. There should not be too many assistants: he would rather have one than three, and rather none at all than five. Both sponges and instruments should be entered upon a written list before the operation, and the surgeon should himself verify the count before closing the abdomen. The operator should do his own sponging during the operation.

DISCUSSION.

Dr. THOMAS said that the subject as presented by the lecturer was interesting, and the paper was characterized by frankness and an evident desire to avoid doing injury to patients. He thought, however, that the frequency of the accident had been overestimated. In his own experience of laparotomy, of between four and five hundred cases, there had been only one case that he could recall, and this he desired to mention as an addition to those in the paper, and as an illustration of the unaccountable manner in which this accident may occur. A patient in the Woman's Hospital, New York, suffering with cancer of the spleen and Bright's disease of the kidneys, had a tumor in the left side of the abdomen, and, although the case was a hopeless one, at the request of the patient's friends an exploratory incision was made. During the operation he did not have a sponge in his hand, and his assistant, Dr. Hunter, used only one sponge. The patient was under ether, as at that time he had not yet recognized the danger of giving ether in Bright's disease, which sometimes is followed by complete suppression of urine. It was so in this case: after the operation the patient did not secrete a drop of urine, but succumbed in a few hours. A small piece of sponge was found in the abdominal cavity, which had probably been broken off from the large sponge while it was being used in the peritoneum, and dropped inside.

Referring to the recommendations given in the paper, he said that he thought it impossible for the operator to do his own sponging, especially when there is a great deal of hemorrhage, or when he has to do some careful dissecting and differentiate the tissues, which would require sponging to keep the field of operation clear. He must, therefore, trust his assistants with the sponges; but he should see that nothing remains in the abdominal cavity. He has only three assistants, uses very few instruments, which are large, and his sponges have pieces of tape (five or six inches long) stitched to them to prevent their being overlooked. One assistant has charge of the instruments, and accounts for them all after the operation; a second assistant administers the anæsthetic; the third assists in the operation directly. The only way to prevent leaving instruments in the cavity is to use as few instruments as possible and let them be of large size. He had great dread of seeing Péan's forceps used, as they are generally allowed to remain temporarily in position, in order to check hemorrhage, but they might easily get lost. While such accidents do occur occasionally, he would not deny—in fact, he fully agreed with Dr. Wilson—that if all the cases were faithfully reported there would be a great many more than there are.

Dr. A. REEVES JACKSON said that having his attention directed to the subject he had found, upon inquiry, that there had been at least three unpublished cases in Chicago (two of sponges, one of forceps), and the fact discovered only after the death of the patients. He approved the sentiments and recommendations of the paper, which were very nearly his own rules. He thought that the case of Dr. Wilson fully demonstrated the value of antiseptic sponges.

Dr. DUNLAP had not had this accident occur, to his knowledge, in any patient of his. He uses very few instruments and does his own sponging. He thought Dr. Thomas's plan a good one. His own preference was for a very large blanket sponge, which he packed in over the intestines to keep them out of the way. He always has his patient in a half-recumbent posture during the operation, so that the fluids may gravitate to the posterior cul-de-sac. He has no dread in making an external incision large enough to permit him to explore the abdominal cavity. Having it open before his eye, it is impossible

to leave a sponge in unnoticed. The only danger is from Péan's forceps, and he prefers to apply a ligature at once to letting go of the forceps. He never passes a vessel until the bleeding is stopped, and he does not close the wound until the cavity is perfectly dry. He recommends large incisions, and said that in all his laparotomies he had never failed in obtaining union in three days' time.

Dr. HOWARD said that he was struck with the manner of counting the sponges in the Good Samaritan Hospital in London. Two women have charge of the sponges,—say fifteen in all. After the operation, one woman picks up the sponges one by one and counts them aloud, handing them to the other nurse, who also counts them aloud as she receives them, which prevents any mistake in counting. While in London he learned of a case of a young woman, nineteen years of age, who, after ovariotomy, complained of so much pain that a young surgeon in the hospital opened the wound and removed a sponge, and the patient recovered. Another distinguished operator opened the abdomen of a patient on account of pain, which he feared might be due to a sponge, but he could not find any: this patient died. With regard to Dr. Thomas's remarks about the danger of ether in Bright's disease, he thought that this was also the case with chloroform, and that deaths under such circumstances had been published. He had himself a case of a young colored woman who died of cardiac paralysis after the inhalation of less than thirty minims of chloroform in a Junkin's inhaler: after death the kidneys were found diseased.

Dr. THOMAS said that the case was not analogous. He had referred to suppression of urine after the use of ether, which did not occur with the chloroform.

Dr. ENGELMANN reported a case of laparotomy for fibro-cystic tumor of the ovary, where a sponge was left in the abdomen by a visitor who usurped the place of the regular assistant, and who afterwards corrected the assistant, who reported a sponge missing, by the assertion that it was all right, and must have been thrown out with some waste water. As no sponge could be detected in the pelvis, the wound was closed. The patient did well for two days, and then sank, with peculiar symptoms of dementia, or melancholia; she did not complain of pain in the abdomen. At the post-mortem, a small sponge was found lying between the stomach and transverse colon, mainly on the right side. There had been no inflammation around the sponge, which was perfectly pure and clean; there was a slight injection of the small vessels in the immediate neighborhood of the sponge. This case is of interest because the list is so small. It occurred because of the interference of a guest, and the deference due him as a distinguished surgeon prevented a remonstrance, and the manner in which it happened was this: in order to stop rather free bleeding, the visitor packed several sponges in succession into the abdomen in order to check it: one of these sponges was left.

Dr. MUNDÉ endorsed the caution with regard to old and friable sponge. His own rule was not to use sponges that have been long kept (antiseptic fluids usually make the sponge brittle), nor would he use one which has been cut or torn. He considered it advisable in the last steps of the operation to have as many sponge-holders as sponges, to use in taking the fluids from Douglas's cul-de-sac.

Dr. BAKER had expected to hear discussed in the paper another class of foreign bodies in the abdomen,—viz., sutures and ligatures. He had met with several cases in which ligatures, after giving considerable trouble to the patient, had gradually worked their way to the surface.

Dr. WILSON closed the discussion by approving most of the suggestions, and stated that the cases must be more frequent than some supposed, for, since writing his paper, he had learned of seven more cases.

Dr. C. D. PALMER, of Cincinnati, read a paper entitled

ABDOMINAL SECTION: ITS VALUE AND RANGE OF APPLICATION AS A MEANS OF DIAGNOSIS AND TREATMENT.

After referring to the value of diagnosis in medicine, he spoke of its especial importance in pelvic and abdominal disorders in women, and cited instances where circumstances prevent a positive conclusion from being drawn, —*i.e.*, some cases of ovarian cyst, effusion in the Fallopian tubes, cancer, and other growths which may be complicated by ascites. Sarcoma of the mesentery is likely to be taken for ovarian cysts. Neither the external character of the tumor, its relation to the intestines, nor functional disturbances of the kidney or other organs can be relied upon to establish the diagnosis. Renal tumors or floating kidney may have the intestines above them, and may be as movable as ovarian growths. Extra-uterine pregnancy also has simulated ovarian tumor. Although there is so much difficulty in diagnosis, it must not be inferred that many mistakes are being made in this department; on the contrary, it is surprising that they are so rare. Ovarian diagnosis is steadily increasing in accuracy. Spencer Wells has said that ovarian diagnosis has reached a degree of perfection as great as any other department of surgery.

Great stress has been laid upon tapping in the diagnosis of abdominal effusions; but, while some insist on its value, others never perform it. Probably the safe ground lies between the two extremes: it may clear up the diagnosis, but, on the other hand, how

many promising cases ready for ovariotomy have been spoiled by injudicious tapping! Spencer Wells estimated that tapping increased the mortality after ovariotomy two per cent. It is an operation of no small risk, in his estimation, and should be omitted, for the diagnosis can be made without it by means involving less risk. Schilling says that tapping is a crime. Stone never taps. Lawson Tait insists that it should never be done for diagnosis. He concluded (1) that tapping in the large proportion of cases is unnecessary, and is superfluous for the purpose of diagnosis; (2) that it is attended by such risk and dangers in its remote effect as to limit its use to a minimum. Spencer Wells limits it to the case of parovarian cyst; but the simplicity of the operation is likely to lead us to underrate its danger. The evidence afforded by the chemical, microscopical, and physical examination is only presumptive, and not positive.

With regard to opening the abdomen, which is generally regarded as a serious operation, he believed its danger was in proportion to the amount of handling to which the viscera were exposed, and the size of the external wound. After referring to the favorable reports of Spencer Wells, Dr. Byrd, and Dr. C. C. Lee (the last-named of whom had seen five cases in which the operation of laparotomy had been begun, and abandoned after opening the abdomen, all of the five recovering), he said that his own experience had been limited to five cases of exploratory incision where malignant disease was suspected and found. In four cases death occurred in from four to thirty days; the other is still living, sixteen months after operation. In cases of malignant disease with very little vitality, the shock of opening the abdomen very often will prove fatal; but in other cases exploratory section may be practised with as good results as tapping. He repeated Lawson Tait's warning against turning an exploratory incision into an incomplete operation, for the mortality in abandoned operation is very much greater than in simple section.

In a certain sense every abdominal section is diagnostic, because no one can tell positively, until the abdomen is opened, what the character of the tumor may be or what complications may exist affecting the question of operation. It is no reproach to a surgeon that he suggests an exploratory incision in order to complete his diagnosis; but it should not be resorted to except in cases where a surgical procedure is likely to be called for, and this contingency is to be provided for in case the abdomen is opened. Early interference gives the best results, and is the order of the day. The incision should be at first small, and may be afterwards enlarged according to the necessities of the case: by opening the abdomen the operator learns the character of the growth, whether malignant or not, its site and attachments, and is able to decide the question whether removal is possible, and, if so, whether it will prolong life. As the rule, no operation should be performed in malignant disease.

There are many conditions which can be relieved by the operation in which exploratory incision for diagnosis is not required:

1. For the detection of simple ovarian tumors; but such tumors are not always uncomplicated, and exploratory incision may be of service where it leads to early operation.

2. For the diagnosis of some interstitial and extra-uterine fibroids; but where life is threatened and surgical interference is needed, the section may be made to verify the diagnosis and enable the surgeon to decide between oöphorectomy and hysterectomy.

3. In certain cases of acute and chronic peritonitis, where the patient is threatened with septicæmia. If the abdomen can be opened, cleansed, and drained, the patient is in a fair way for recovery.

4. In certain obstructions occurring in the intestinal tract, just how soon and how far it is permissible to interfere surgically in such cases is yet undecided; but laparotomy has more than once been of service in saving life.

5. Some cases of chronic pelvic abscess are susceptible of relief by this means. A very large proportion of these cases result from hæmatocele. Many of these cases recover by spontaneous evacuation through the bowel or bladder. Tapping is the best method of treating such collections; but where the abscess is discharging through several tortuous channels, free opening, cleansing, and drainage are advisable.

6. In extra-uterine gestation, laparotomy should be practised early if the fœtus cannot be destroyed by electricity. When the fœtus is fully developed, it becomes a necessity.

DISCUSSION.

Dr. ENGELMANN said that the exploratory incision had been too little used in this country for diagnostic purposes. He would not regard it as a means of ordinary diagnosis, as he would bi-manual manipulation; but where the diagnosis is doubtful, the term exploratory incision will often aid in getting out of it if the case is not a suitable one for operation. He does not regard it as being as dangerous as tapping. He recalled three cases in which he had performed exploratory incision, all of whom got well. The first was one of uterine cancer, which seemed favorable for hysterectomy; but after opening the abdomen the disease was found in the neighboring structures, and the operation was not performed. A second was of similar character; and in the third the malignant disease seemed generally diffused.

Dr. MUNDÉ said that exploratory incision, not only in suspected ovarian diseases, but in abdominal disorders, had not been as much

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resorted to as it should have been. At the commencement of the operation the majority of ovariotomists make a large incision, with the expectation of going right on with it, and with the feeling that, having begun the operation, they do not like to back out of it; they go on to finish the operation, even if it also finishes the patient. He agreed with the lecturer that the exploratory incision is rather a safe procedure, and not so dangerous as tapping. He believed that tapping was responsible for twenty-five per cent. of the mortality after ovariotomy, and the risk is greater than from the ovariotomy itself. He has now under treatment a large uterine myoma, for which he proposes, within a month, to make an exploratory incision, and afterwards determine whether to remove the uterine appendages or perform hysterectomy. In a case of pelvic abscess he preferred to aspirate, and, finding pus, to make a free incision in the roof of the vagina, tie any bleeding vessels, pack the cavity, and the patient usually gets well. He only differed from the speaker in calling this an exploratory incision, agreeing with him as to after-treatment.

Dr. WILSON regarded every laparotomy as an exploratory incision: he never knows exactly what he has until he opens the abdomen. It is not so dangerous as tapping. In a case of amniotic dropsy with great abdominal distention, although he was aware of the existence of pregnancy, yet the effusion was so great that he did not know whether it might not be ovarian tumor or ascitic fluid. After deliberating whether to open the abdomen or to put in a trocar, he decided to make an exploratory incision, and found a very large uterus, the walls not being any thicker than an ordinary cyst of the ovary. If a trocar had been used, it would have gone immediately into the uterus. As it was, he closed the wound, dilated the mouth of the uterus, ruptured the membranes, and gave exit to several gallons of fluid, delivered twins, and the woman got well. In closing, he repeated that every laparotomy is necessarily an exploratory incision.

Dr. MAURY said that he had had two abdominal sections for exploration. The first was supposed to be a multilocular ovarian cyst, and there seemed no doubt about the diagnosis, but the incision showed it to be a tumor of the mesentery. The wound was closed, and the patient recovered and lived for a year afterwards. In the other case, a large myoma filled the entire pelvic cavity. The question of removing the ovaries was considered. Upon opening the abdominal cavity it was found to be impossible to remove the ovaries. The operation was given up, and this patient also recovered.

Dr. JACKSON said that the paper had a wider range than the discussion. He would like to hear the experience of the Fellows as to the value of abdominal section for pelvic abscess.

Dr. DUNLAP reported a case of a man, a physician, who came under his care, suffering with commencing psoas abscess. An exploratory incision in the median line, below the umbilicus, revealed the abscess, which was opened and washed out. The patient recovered.

Dr. SCOTT also recalled a case of pelvic abscess, in which the operation was delayed by the refusal of the patient. Finally the abdomen was opened, and it was found that a communication had been formed between the abscess and the large intestine. The result of the operation was very favorable. Obstinate vomiting at once ceased, the condition steadily improved, and the opening in the bowel probably closed, as the patient got entirely well. In another case, drainage by the vagina failed to empty the collection, and abdominal incision was resorted to, and the original cause of the trouble was found to have been a suppurating salpingitis, the cellulitis having been secondary. The patient, before the operation, had been suffering with septicæmia, and died two days later. If the abdominal incision had been made early for diagnostic purposes, the patient might have recovered.

Dr. PALMER closed the discussion by repeating some of the points in his paper. With regard to chronic pelvic abscess he said that simple exploratory incision is a matter of duty on the part of the attendant, especially when the track is long and tortuous, and when it cannot be reached from below. In conclusion, he recommended the more frequent performance of laparotomy, both as a means of diagnosis and for the purpose of opening methods of treatment which otherwise would be impossible. He would not recommend it in marked malignant cases when the vital powers are low.

Dr. ENGELMANN, by permission, stated that in a case of malignant disease operated upon by him the union was by first intention, and the patient rapidly recovered from it.

Dr. PALMER repeated that in four cases under his care of malignant disease the patients died in from four to thirty days after the operation.

Dr. PAUL F. MUNDÉ, of New York, read a paper on

CERVICAL FIBROIDS AS A CAUSE OF DYSTOCIA, AND THEIR REMOVAL BY VAGINAL ENUCLEATION.

The usual site of fibroid growths is in the uterus rather than in the cervix; but they do occur in this situation, and, like other fibroids, they grow rapidly during pregnancy. They may grow so large as to fill the upper portion of the pelvic canal and make delivery extremely difficult; and, when so large, they are apt to be partly corporal and partly cervical. The tumor may descend in front of the head of the fœtus, and may be so contused as to

slough off, or its size may be so reduced by hemorrhage and pressure as to allow it to retire above the brim of the pelvis, and delivery may go on. If the fibroid has a long pedicle, it is easily removed, but the case is more difficult when it is sessile; and it was of this condition that he wished especially to speak. When the sessile fibroid is large, and labor has begun, two plans of treatment are possible: 1, to excise the tumor piecemeal, or, 2, perform Cæsarean section; but the results of this are so bad that the former is preferable. Out of thirty cases, there were twenty-four cases of maternal death, and sixteen of the child. Schroeder showed a mortality of sixteen per cent. The dilatability of the parts at the time of labor is an additional argument in favor of enucleation, and renders the operation more successful than under ordinary circumstances. Dr. Thomas operated upon a woman by Cæsarean section under these circumstances, and the patient died. Afterwards, in speaking of the case, he said that in a similar one he would now try enucleation with the serrated spoon. Where the child is not living or viable, vaginal enucleation would always be preferred. He reported the following case. Mrs. F. F., 38 years of age, married, had her last child a year ago. She had had hemorrhages before delivery (supposed placenta prævia), and bled for five or six months afterwards, and at intervals ever since. She was brought into the hospital with the curious diagnosis of "elephantiasis ossis uteri," whatever that might be. A large fibroid growth was found filling the upper part of the vagina, and the tumor extended up to the diaphragm. Pregnancy was detected, but the tumor so completely blocked up the pelvis that the finger could not be passed beyond it, or between it and the promontory of the sacrum. He did not interfere much with it, for fear of inducing premature labor, which had reached the sixth month. After checking hemorrhage with astringents, the question was whether to operate at once or to delay. Two courses were open: first, to wait, controlling the hemorrhage as much as possible, until labor began, and then to enucleate and deliver, or, if not, to remove the child by Cæsarean section, and finish with Porri's operation, or to perform intra-abdominal enucleation, with abdominal section, by the method of Bryson. In the latter case the chances of the mother would be extremely poor, the mortality being about eighty per cent. Moreover, while waiting, the tumor would have time for still further development, and possibly make Cæsarean section absolutely necessary.

The second plan was to wait only a couple of weeks, and then remove the tumor without interfering with the pregnancy, if possible.

A case of Schroeder's, reported by Loman, his assistant, was almost identical with this one. He performed the operation towards the close of pregnancy, without interfering with it. The success of this case of Schroeder confirmed the lecturer in his intention to operate at once, since the delay until full term would be extremely hazardous.

The operation was accordingly performed, traction being steadily kept up on the mass by two volsella forceps, bringing it down as it was enucleated by the serrated spoon; finally, as the forceps pulled out, he hooked his fingers in the mass and delivered it. The amount of bleeding was slight, and no hemorrhages occurred subsequently. Labor came on shortly afterwards, and he removed the fœtus and placenta and packed the wound with iodoform gauze. The patient did not rally well from the ether, but finally revived after artificial respiration and nitrite of amyl inhalations. There was a temporary rise in temperature for two days, but the patient subsequently did well. The wound was cleansed and again packed on the second and third day afternoon, and less frequently afterwards; it was entirely closed at the end of three weeks, and several weeks later only a slight thickening of the posterior lip of the cervix was present. The tumor, which was presented to the Society, measured twenty inches in circumference, and its principal diameters were eight by six by two and a half inches: it weighed fifteen hundred grammes, or about three pounds.

After a reference to cases published by Playfair, Braxton Hicks, and Loman, he concluded that this case was the largest growth of the kind yet recorded.

So far as can be judged from the description, the size of the tumor in this case is double that of any of the eight cases collected by Loman, and is approached only by Schroeder's, which was six inches long to eight in this one.

To collect the results of these nine cases (only eight of which were available, since Langenbeck's had not been decided at the time of reporting): we find that the mothers all recovered without difficulty. Of the children, three were premature and not viable; one was extracted dead by version, one was perforated before the tumor was enucleated, one was delivered by the forceps asphyxiated (whether resuscitated or not is not stated, but it probably was, or it would have been reported as dead), and two were born alive after enucleation of the tumor,—one by the forceps, the other spontaneously. Thus, of five children, which only can be included in this estimate because they only were viable, three were born alive, or could probably have been born alive if the tumor had been enucleated before perforation was thought necessary, and one died during extraction after version, an operation known to be frequently fatal to the child under any circumstances. Thus, all the children of the cases in which the proper treatment of enucleation was adopted, before attempts at delivery were made, were saved.

Truly, not a bad showing; but how different from twenty-four dead mothers and sixteen dead children out of thirty Cæsarean sections for the same condition!

That the loose connection of these tumors to their envelope during gestation greatly facilitates their enucleation is obvious, and the softness of the mass, also peculiar to pregnancy, allows tumors of even considerable size to be elongated and attenuated by traction, and thus removed through the pelvic outlet, which in the non-parturient condition would be entirely too bulky for that orifice without mutilation; and fortunate it is that these favorable conditions exist at that time. The dangers to the mother from septic causes through the large raw tumor-cavity did not seem as great as we might expect, since in the case he had reported there was only a temporary rise in temperature. He said, in conclusion, that "it is to be hoped that in future, when a fibroid, no matter how large, is found obstructing delivery, the attempt will always be made to enucleate it, either whole or in part, through the vagina, before endeavoring to drag the child past the tumor with the forceps, or performing craniotomy or version, or, worse than all, sacrificing the mother and possibly the child by Cæsarean section."

In the discussion on this interesting paper, in which Drs. JENKS, WILSON, BYFORD, DUNLAP, VAN DE WARKER, and REAMY engaged, the rarity of this complication of labor was dwelt upon, and a general approval of Dr. Mundé's course was expressed.

Dr. T. GAILLARD THOMAS exhibited a form of apparatus which possessed historical interest. It was a jointed steel girdle, covered with velvet and fastened with a lock. The special feature of the apparatus consisted of a steel perineal band, having apertures opposite the vulvar and anal orifices when in position; these apertures being surrounded by saw-teeth. This apparatus (similar to that exhibited at the Hôtel de Cluny at Paris) was found in several pieces in an old trunk received among a lot of effects from an old French estate by a resident of Long Island, who had presented it to Dr. Thomas, who had had it restored and prepared for exhibition to this Society.

Dr. THOMAS then proceeded to read his paper on

### A FURTHER REPORT UPON EXTRA-UTERINE PREGNANCY, EMBODYING SIX CASES.

Since reporting twenty-one cases to this Society in 1882, he had seen six more, which he wished to add to the statistics. Most of these cases had been seen in consultation, which would account for the large number in his individual experience. On account of the liability to rupture of the sac towards the fourth month, he advocated early diagnosis and early treatment.

The experiments of Leopold upon artificially-produced extra-uterine fœtation in rabbits and its results he considered as of great interest in this connection. Leopold concluded that rupture of the sac is a common result in extra-uterine pregnancy, and that the dead embryo is usually encapsulated and remains as a foreign body. The inference that recovery in the human race, after similar rupture, may take place, was one that Dr. Thomas fully endorsed. In case of active hemorrhage, the operation of opening the abdomen and the application of ligatures to the bleeding points was advocated twenty years ago by Dr. Stephen Rogers, of New York; but he had no actual experience in such an emergency. Lawson Tait had reported, in the *British Medical Journal*, five cases operated upon in January, 1883, four of which recovered, one died. His own experience had proved that this treatment was entirely justifiable. Dr. Charles K. Briddon, of New York, following Tait, had operated in October, 1883. The history of this case is included in the series of this paper.

*Case I.*—Mrs. F., 27 years old. Four weeks after cessation of menstruation she received a shock in stepping from a street-car; she had an attack of pelvic peritonitis, and was sick for several months, during which time the abdominal tumor steadily enlarged. Her progress was steadily towards death. An examination failed to establish an accurate diagnosis. Aspiration was performed, and about four ounces of straw-colored fluid were obtained. Subsequently her sufferings became agonizing, and, except when relieved by morphia, she had constant vomiting. Death occurred twelve hours later. At the post-mortem the uterus was found enlarged and pushed forward. There was general peritonitis. A fœtus of four months was found in Douglas's cul-de-sac. Had an accurate diagnosis been possible, laparotomy would still have been fatal. This was the third case in which he had performed aspiration in the early months of pregnancy, and all three proved fatal.

*Case II.*—Mrs. G., 32 years of age, had had three children. Menses had stopped for nineteen days. The patient was in an unfavorable condition for operation, and, as there were some doubts as to the diagnosis, a week later it was decided to try electricity. The battery was used for five successive days, one pole in the rectum, the other upon the abdomen, using a strong faradic current. The tumor became smaller, harder, and finally disappeared. This was a case of most desperate character, and he had no doubt that had any other course been pursued she would have died.

*Case III.*—Mrs. H. had had three miscarriages, she also had a suspected extra-uterine pregnancy, and was treated by the faradic current from a Kidder battery, and, this not proving sufficient, the continuous current was used from twenty cells for several days. She

also made a good recovery. Had he not been successful in destroying the fœtus, he would have performed laparotomy.

*Case IV.*—An Irish lady, four months pregnant; examination showed an ectopic gestation, the tumor tying behind the uterus. The same treatment was instituted. The patient entirely recovered.

*Case V.*—Mrs. F., 28 years of age, mother of five children. This was the case of rupture of the Fallopian tube in which Dr. Briddon performed laparotomy. The patient rallied, but died soon after operation.

*Case VI.*—Mrs. X., 23 years of age, married six years; mother of one child four years old. In this case pregnancy had advanced to the ninth month. She sent for her doctor (Dr. Jewett) with all the symptoms of labor. The os did not dilate as the result of the pains, and an examination showed that the uterus was empty. Dr. Thorne was called to see the case, and diagnosticated ectopic pregnancy, but saw no reason for operating, as the child was dead, and he had had so much trouble with the placenta in his other case. The rule should be not to operate because the fœtus is in the abdomen, but because the fœtus is giving trouble. He preferred not to operate at full term, but to wait until the placenta shrivels, unless the child is known to be alive. This patient was afterwards taken to the Woman's Hospital, and Cæsarean section performed. The placenta was the largest he had ever seen, and weighed four pounds. The fœtus weighed sixteen pounds. The sac was attached to the ascending, transverse, and descending colon. Fearing to leave it to cause septicæmia, he made a continuous cobbler's stitch about an inch from the intestine, and removed the remainder of the placenta: he then brought the remnants of the sac down to the lower angle of the wound, and fastened it there, "marsupializing the woman," as Dr. Pallen says. The antiseptic procedure, except the spray, was adopted. She subsequently entirely recovered.

In three other cases he had adopted this expedient of fastening the placenta in the wound and allowing it to slough away. After the fourth month he advises waiting for indications for operating; before that period, although the great triumphs of abdominal surgery might lead us to suppose that laparotomy is the preferable method, he advised the trial of electricity, an infanticide agent of great value, which in the early months of extra-uterine gestation should always be preferred to the dangerous expedient of laparotomy.

Dr. R. B. MAURY, of Memphis, read the notes of

A CASE OF TUBAL PREGNANCY WITH RUPTURE OF THE SAC.

The patient had been delivered of a child three years before, when there was no evidence of abdominal or ovarian disease. Her menses were profuse and irregular; she had pains in the hypogastrium at intervals, and when he was called in she had an apparent attack of collapse, with symptoms of intra-peritoneal hæmatocele. She received usual treatment for shock, but without bringing on reaction; the patient was thought to be dying. Upon examination later in the day, the uterus was found enlarged, and just above the pubes, and behind it a small tumor could be felt through the abdominal wall, rising half-way to the umbilicus: it could not be reached by the finger in the vagina. The diagnosis was tubal pregnancy. Afterwards symptoms of peritonitis appeared; on the sixth day she had a chill, temperature 103°, pulse 150; on the seventh, temperature was again 103°; but on the next day it fell to normal, and did not rise again. Subsequently the tumor became progressively smaller. Six months afterwards she had a uterus as movable as in health, and behind it a small hard tumor. Hemorrhage had entirely ceased. There had been no deciduous membrane. With regard to etiology, he only submitted one observation,—that the husband had a stricture of the urethra, and had had urethritis several times in the preceding two years.

With reference to the question of laparotomy in this case, recognizing the rupture, the question of operation was discussed, and it was decided not to operate until she got over the shock. After waiting for several days, he had written to Dr. Thomas, who advised him to wait for symptoms, and, if pelvic peritonitis appeared, to operate. The result showed the wisdom of this course. It would seem to be the better course for surgeons in such cases to postpone operation until the shock of the rupture has passed away.

In the rather desultory discussion which followed, Drs. MUNDÉ, HARVEY, PALMER, WILSON, HOWARD, and BAKER reported other cases, and expressed views substantially in accord with those of the lecturer.

Dr. PAUL F. MUNDÉ, of New York, read a paper entitled

THE PROPER LIMITATION OF THE OPERATION OF COMPLETE VAGINAL HYSTERECTOMY FOR MALIGNANT DISEASE.

A strong and apparently convincing paper upon this subject was read at the last meeting of the Society, which declared that, both as regards the immediate fatality of the operation itself and the speedy recurrence of the disease, the operation was unjustifiable. In this verdict the Society apparently concurred, with the exception of two members. To the author this absolute condemnation of the total removal of the cancerous uterus seemed hasty, premature, and based upon insufficient clinical experience. Had the condemnation been restricted to the method of Freund of removal by abdominal

section, he would have heartily endorsed it, as it had developed a mortality of sixty-six per cent., and in the few cases of recovery the speedy recurrence of the disease took place almost without exception. This operation has been abandoned by Freund, or at least restricted to exceptionally favorable cases of undoubted limitation of the disease to the body of the uterus, with unusually thin walls and lax ligaments. This operation he had not personally performed, but had seen several cases in the hands of several eminent operators, who, after persistent efforts, either failed to remove the uterus, or in doing so completely exhausted the patient, the result in either case being speedy death from shock or hemorrhage. But the Society apparently condemned all operations for the removal of the cancerous uterus, apparently overlooking the excellent results of the removal of the organ through the vagina. It is due to the many experienced surgeons and conscientious operators who hold a different opinion, and to the interest of progressive surgery, to enter a respectful protest against the wholesale condemnation, at least so far as this vaginal operation is concerned.

As early as 1876 (two years before Czerny, of Heidelberg, revived the old, long-forgotten operation of Sauter, of Constance, who was the first to devise this method and carry it out successfully), the author's attention had been directed to the operation, and before the New York Obstetrical Society (October 17, 1876) he had made this suggestion, during the discussion of a fatal case of the abdominal operation for hysterectomy. While at Wurzburg in 1868, he had seen a reprint of an old graduation-thesis presented to the University of Göttingen, written in 1827 by Von Siebold, on the "Extirpation of the Cancerous Uterus." After reviewing the various methods of Sauter, the elder Langenbeck, and others, he said that his personal investigations on the cadaver had demonstrated the impossibility of detaching the peritoneum from the non-puerperal uterus above the level of the internal os. A perusal of Schroeder's operation of wedge-shaped excision up to the internal os and of vaginal extirpation, together with Dr. Jackson's paper, decided him to seize the next favorable opportunity to perform the latter operation.

*Case I.*—E. M., 43 years, ten children, two abortions, came, in October, 1883, to his service at the New York Polyclinic for menorrhagia existing six months. Last child born nine years before. Cancer of cervix was found, extending upwards, but limits could not be ascertained. Uterus was freely movable, vagina capacious, parametrium apparently free of disease. No enlarged glands or induration of any kind in the pelvic cellular tissue. Vagina healthy, general health still fair. On October 10 the operation was performed. Sims's position; uterus drawn down with double volsella forceps; with a knife he first made a semicircular incision through the anterior fornix vaginæ, pushed up the bladder with the fingers, then completed the circuit of cervix by posterior incision, detaching the vagina very easily with the fingers, except at the side where the vessels enter and leave and the folds of the broad ligaments join each other. Two fingers of the left hand were entered in Douglas's pouch, to the right border of the uterus, and the peritoneum was then pushed out and severed with closed scissor-points; the peritoneum was then readily torn, so as to leave the uterus free except the attachment of the broad ligaments. Seizing the fundus with a tenaculum through the posterior opening, with extra-abdominal pressure the uterus was retroverted, and after considerable difficulty, owing to the large size of the uterus, it was drawn through the posterior incision. Each broad ligament was now tied in three sections with No. 2, braided, carbolized silk, and divided with scissors. The application of the ligatures was quite difficult, but no blood was lost from the ligaments, and not more than a few ounces in all. The ovaries were readily removed with the tubes. The patient's condition was good. The wound in vaginal vault was closed with silk sutures, the peritoneum not being occluded. A rubber drainage-tube was introduced, and the vagina packed with iodoform gauze. There was no shock. On third day the tampon was removed and vagina irrigated; on seventh day drainage-tube was removed. Patient left bed on twelfth day, and on the thirteenth all but three of the ligatures came away; the stitches were removed on the sixteenth, when the wound was practically closed. Patient recovered from the operation. There was no return of the disease for nine months, when it reappeared in the cicatrix. No further operation is contemplated. The patient's general health is still good.

In Case II. the operation was a difficult one, the disease having extended to the surrounding tissues. The patient did not react from the shock, but perished a few hours later. In a similar case he would not again perform the operation, nor would he consider it advisable.

Admitting the truth of Dr. Jackson's first conclusion concerning the difficulty of early diagnosis of uterine cancer, he claimed, however, that our facilities, both as regards the greater readiness of the female sex to submit to examinations when the significance of certain symptoms is made clear to them, and as regards the early recognition of cancerous degeneration, will doubtless improve with every year. He said that it will be granted that the number of cases in which vaginal hysterectomy for cancer is indicated as justifiable and offers fair chances of recovery will always be small. Out of 812 cases of uterine cancer seen by Schroeder or his assistants,

only in 34 was colpo-hysterectomy performed. Marter reports 52 hysterectomies; Olshausen, 32; and out of over 160 cases of uterine cancer which he had seen, he found only 2 cases which seemed to him to permit the radical operation. So far as the first-named operators are concerned, their indications have been, by their own statement, considerably restricted since they began to operate.

*Secondly.* Dr. Jackson states that, the diagnosis once established, there is no hope for a radical cure. This is refuted by Carl Braun's statistics for various operations, chiefly the galvano-caustic amputation of cervix. Paulet reports 136 operations of this character, 10 of which proved fatal; and of the 126 patients who recovered, 31, or 25 per cent., remained well after two years. Schroeder reports 129 cases operated on during the last eight years: 28 cases, or $21\frac{8}{10}$ per cent., remained well after two years. He frankly states that in 4 of these cases the disease returned as late as from two and a half to three and a half years, but 24 remained well after this period,—certainly an excellent result in this fatal disease.

The operation compares favorably with that for cancer of other organs. Surely no one will doubt the correctness of the diagnosis in the hands of such an experienced gynæcologist as Carl Braun. A disease in which 144 of the patients remain well after two years cannot be said to be incurable by operative measures.

Tables were then shown in reply to the statement that the operation is a highly dangerous one and affords to those who recover no hope of radical cure, which show that out of 82 operations there were recoveries in 48, and 32 remained well after two years. The comparatively few cases which have been under observation for two years or longer after the operation may appear strange; but it is because the operation is so recent that the few operators have had no opportunity of following up their cases, or, if they had, they have not yet reported them.

The result of 39.5 per cent. compares very favorably with Paulik's cases of removal of cancer of the cervix (only 25.0), or of Schroeder (21.8), after different methods of operating.

The lines of the operation certainly need to be more strictly drawn. The presence of enlarged glands or infiltrations of any kind in the parametrium (vaginal wall or pelvic cellular tissue), the fixation of the uterus, even to the slightest degree of exudation,—these conditions should absolutely contra-indicate hysterectomy. A rectal examination with the finger will prove of great value in determining these points.

He said that in the discussion at the Berlin Obstetrical Society (May 23, 1884), Löhlein, Ruge, Olshausen, Hofmeier, and Marter had spoken in favor of this operation when performed in selected cases.

*Thirdly.* As regards the danger of the operation itself, it has been exaggerated by Dr. Jackson. Ovariotomy is also dangerous, but it is justifiable. So are nephrectomy and other major operations. A table was here introduced to show the mortality directly following the operation of vaginal hysterectomy for cancer: 235 cases and 52 deaths in Europe; 21 cases and 10 deaths in America; making 256 cases, with 62 deaths, or 24.6 per cent. This disproves Dr. Jackson's statement as to immediate danger of operation.

The two main questions to be decided are really,—

1. Can vaginal hysterectomy for uterine cancer be performed without so great a loss of life as to render it unjustifiable? and,

2. Can we hope to secure by it complete immunity from a return of the disease, or at least so much relief from suffering for several years as to compensate the patient for the risk she incurs of losing her life by the operation?

To each of these he returned an affirmative answer, and then proceeded to consider the details of the operation. In conclusion, he said that, inasmuch as vaginal hysterectomy is an operation based on sound surgical principles, the object of which is to save and prolong life, and not to shorten it, and as the indications for results and justifiability of operation are not a matter of sentiment or theoretical reasoning, but of solid facts and figures, the operation is one which should not be absolutely rejected, but increasing experience will show its usefulness in its limited field. Finally, he reviewed the minutiæ of the operative procedure for vaginal hysterectomy, the success of which would be favored by early operation, before the general health is seriously impaired, and before the disease has extended far into the uterus. Where surrounding tissues or organs are known to be involved, the operation is not justifiable.

### DISCUSSION.

This paper gave rise to a spirited discussion, shared by Drs. REAMY, JACKSON, VAN DE WARKER, ENGELMANN, PALMER, BAKER, SCOTT, FENGER, and MUNDÉ. The different speakers varied radically in their recommendations, and differed in opinion upon the utility of any operation whatever in cases of uterine cancer. Hysterectomy was considered an heroic remedy, whose limits of usefulness were certainly very restricted, and whose utility had not yet been satisfactorily demonstrated. Partial operations, like that of Dr. Baker, were thought to be safer, and, in some cases at least, more successful. The operation recommended by Dr. Mundé has not been practised a sufficient period of time to permit a legitimate comparison with other methods (or none at all) as to the relative length of life afterwards.

Dr. EDWARD WARREN SAWYER, of Chicago, read a paper entitled

SOME REMARKS ON THE OCCIPITO-POSTERIOR POSITION IN VERTEX LABORS; WITH AN ANALYSIS OF THIRTY-EIGHT CASES OCCURRING IN THE PRACTICE OF THE AUTHOR.

After referring to the great disparity existing in the recorded statistics as to the comparative frequency of posterior position in vertex labors, he said that he had met with thirty-eight instances in one hundred and eighty-three labors, or in nearly one-fifth of his vertex cases; in three the occiput was to the left, in thirty-five to the right. Twenty-six occurred in primiparæ, twelve in multiparæ, the greater frequency in the former being due, in his opinion, to the slightly greater density of the tissues in front, by which the back of the child is forced into the back part of the uterus, whereas in multiparæ the relaxation of the parts allows the occiput to occupy the position to which it naturally gravitates, with the back to the front; the excess of the right position over the left is undoubtedly due to the presence of the rectum.

The prevailing idea of the mechanism of posterior vertex positions is that it is the same as in anterior positions, the rotation being more extended (Tarnier, Leischman, Lusk); yet this doctrine is somewhat questioned by some. His own observation was that when the occiput engages in a posterior position it persists in this position, and naturally is delivered in this position, very rarely rotating to the front. In thirty cases out of thirty-eight it was delivered in the posterior position; rotation to the front with the forceps was not attempted.

He next considered the question, How long should the attendant wait for rotation without interfering, when the head is near the inferior strait, before putting on the forceps? After referring to a case of Madame Boivin's, where the woman was delivered of a dead child after waiting forty-eight hours, the mother dying afterwards, he said that in his own experience occurred the following case: the wife of a physician, who had been twenty-eight hours in labor, the head refusing to engage on account of posterior position, he performed version and delivered, but she died in a few hours. In another case he delivered with the forceps successfully after twelve hours. In no instance had he regretted early interference with the forceps, but he had several times regretted too much delay. He had been guided by a simple precept,—viz., not to allow a presentation to remain more than two hours at any point in the parturient canal. After the bag of waters has been drained away there is greater danger to the tissues of the canal.

Referring to the difficulty of ascertaining by the touch alone the position of the presenting head, he said that where the labor goes on, and some difficulty is found in the second stage, this cause should be suspected; it is a condition of danger, and demands the interference of the attendant for the mother and the child. The diagnosis can only be made positively by introducing the hand into the vagina, in order to permit the fingers to ascend in front of the child and detect the superciliary ridge. For this examination the mother should have ether administered.

Having recognized the position, two courses are open for the obstetrician: (1) to deliver with the forceps in the same position, or (2) to endeavor to change it to an anterior position. The latter can only be done by introducing the hand into the vagina, so as to grasp the fœtus and turn the shoulders with the head. It is always difficult to turn a slippery head with the fingers alone. If the attempt fail to turn the shoulders with the head, there is danger of twisting the neck.

Where it is decided to deliver with the forceps in the posterior position, he places the woman upon her left side, and has her under the influence of ether. Tarnier's forceps he regards as very dangerous in this class of cases. He uses his own modification of Simpson's forceps, and applies the blades to the sides of the child's head. The handles of the forceps should be brought well forward, so as to keep the head in complete flexion. When left to nature's unaided efforts, the sharp vertex ploughs through the perineum and may perforate it; with the forceps the perineum may be protected, and the head can be brought down in the occipito-frontal diameter, which is one-fourth inch less than the occipito-mental. The rule is to keep the head flexed. For this purpose he prefers his continuous-curve forceps, which he presented to the profession in 1878. While in the multiparæ the perineum was often saved, it was lacerated in all the primiparæ.

The mortality was as follows: four children were still-born; six others died shortly after birth; one died in the uterus from rupture of the umbilical cord; some may have died from injury with forceps.

He concluded by exhibiting his forceps, and explaining their peculiar advantages for the condition under consideration.

In the extended discussion on this paper, in which Drs. RICHARDSON, REAMY, JOHNSON, HOWARD, ENGELMANN, and the PRESIDENT participated, a general disagreement with Dr. Sawyer's opinions as to the mechanism of occipito-posterior positions was shown, and no particular advantage was accorded to the single-curve forceps. Even the diagram copied from Snelling unfortunately came in for adverse criticism on account of deformity and want of conformity with nature.

Dr. GEORGE J. ENGELMANN, of St. Louis, presented two papers, entitled "Periodical Symptoms in Uterine Disease," and "A Rare and Fatal Form of Sepsis without Symptoms."

The former was read by title, the latter *in extenso*.

### A RARE AND FATAL FORM OF SEPSIS.

There is a peculiar form of septic poisoning, due to obscure causes, puzzling in its manifestations, apparently of favorable prognosis, but invariably fatal in its termination. The symptoms are not those of septic poisoning: none of these may be present, or one only and the others absent. The temperature is usually not above the normal, so that the physician who depends upon the thermometer may be deceived and misled into giving a favorable prognosis. These are cases in which a sort of medical intuition is required rather than ordinary diagnostic skill. The text-books and usual authorities do not call attention to this class of cases, perhaps for the very reason that it is difficult to describe a symptomless disease.

Fever and pain are the symptoms most usually relied upon in septicæmia, but here they may both be absent, and the danger is greatest where the symptoms are least or are absolutely wanting. There may be no elevation of temperature, no apparent depression of the vital powers, no profuse sweats, no elevation of the pulse, no diarrhœa with intestinal catarrh. There may be chills, or there may be none: in fact, it is the absence of symptoms rather than their presence which characterizes this form of septic poisoning. The pulse may be slightly rapid and feeble, and there may be some painless looseness of the bowels, or bronchial catarrh, but nothing marked. He must, therefore, take exception to the statement of Dr. Barker that the "symptoms will vary with the quantity of the poison absorbed and the site of the disease," and that the thermometer "is the best means of recognizing the cause, as there is always elevation of temperature," as it had not been confirmed by these cases.

This condition is apt to follow the removal of uterine fibroids and ovariotomy; but it may occur in either sex. These views are not based upon Dr. Engelmann's experience alone; he has had others in consultation with him, who could confirm his statements. He had seen such cases where able professors had denied the presence of sepsis, even until the last day of life. He might mistrust his own observation, had it not been that others had seen the cases with him.

His first case was an elderly gentleman, suffering with enlarged prostate, who had been in good health, and was travelling in Germany. As he was in the railway-cars, he could not empty his bladder when he wished, and a few days later found difficulty in passing his water. A catheter had to be used: still he did not get better. He was in able hands, under the charge of gentlemen connected with Langenbeck's clinic, and careful examinations were made, but no symptoms of disease of any kind were detected. The catheter was passed easily; the urine was clear, but the patient was evidently failing. At the end of six weeks he passed away, comatose, without any symptoms. A post-mortem examination revealed a collection of pus surrounding the kidney, which appeared to be secondary to a small abscess in the prostate gland. The ureter passed through a sac of pus for almost its entire extent. It is strange that this did not produce any effect upon the pulse or temperature; but there was a slight diarrhœa shortly before death, though not a septic diarrhœa.

In a second case, a child died from this form of septic poisoning after diphtheria, which was one of several which he had seen which were precisely alike, without any fever. For several weeks septicæmia was progressing in his body without producing symptoms, until he suddenly had convulsions, and died.

Another case was that of a primipara, a young woman 28 years of age. The child was delivered by the breech, and there was some difficulty in removing the placenta; the perineum was torn a little; no operation was performed, but antiseptic injections were used. Although the temperature was 103⅕° and pulse 140 the next day, this soon subsided, and the temperature remained about 98⅖° to 98⅘°. She then expressed herself as feeling well and comfortable, but her abdomen was immensely distended. He was called to see her at this time, and considered the case hopeless. The pulse alone was affected,—it was 104 and depressed; the temperature was normal. She continued thus, feeling well, for several days; but on the fourth day she began to sink rapidly, vomited constantly even fæcal matter, and died comatose. After death her peritoneal cavity was found filled with pus.

The next case of septicæmia was one which was not recognized as blood-poisoning by one of our oldest and best physicians, and, after continuing under his care for four to six months unnoticed, went to its end without being discovered. The case was originally one of fibroids of the uterus in a virgin 56 years of age. There had been hemorrhage and other symptoms of fibroids; she had a discharge of a dark color, foul-smelling, containing shreds of tissue. Her pulse was 80 to the minute, temperature 99°. Coming under his care, he now used antiseptic injections into the uterine cavity, and afterwards powdered the cervix with iodoform; he gave quinine in large doses until her condition gradually changed. He told her physician that she should not be treated locally only, as she was suffering from septicæmia. The discharge afterwards became less, the pulse improved, and she was much better, apparently, from cleansing the uterine cavity. He stopped treatment, and the next day she had a chill, followed by abdominal pain and fever (104°); pulse, 120; but the temperature of the next few days was 98°, 97⅒°, 97⅘°, and just before death it was 95° in the rectum. In this case a physician assured the family that there was

no septic poisoning in the case, because of the low temperature.

In another case the patient suffered with pelvic peritonitis. The temperature was only half a degree above the normal, the pulse was either a little accelerated or remained at the normal. There was no pain and no sensitiveness in the abdomen; the patient felt well, but, contrary to expectation, she gradually sank away.

He believed that, as these cases are not infrequent and are usually fatal, they should be recognized. As they are also extremely interesting, he had deemed them worthy of discussion at this meeting.

DISCUSSION.

Dr. RICHARDSON said that he had seen five or six such cases, and would confirm what had been said as to their history and prognosis. The very hopefulness of the patient would lead him to suspect the presence of this form of septicæmia.

Dr. REAMY endorsed the description as far as the slow or not accelerated pulse and low temperature; he had also noticed a sort of mental excitement,—the patient feels very well, and calls especial attention to the fact. He mentioned particularly a class of cases with distended abdomen without elevation of temperature, and also cases of peritonitis without fever, which are closely allied to those mentioned, and likewise prove fatal.

Dr. J. TABER JOHNSON reported a case of a woman on the ninth day after delivery, without ordinary septic symptoms, but she said that she was going to die, although she felt well. There was no elevation of pulse or temperature, but she did die. He thought that the death after diphtheria might be due to some other cause than septic poisoning.

Dr. ENGELMANN closed the discussion, reiterating the principal features of the cases.

The following papers were read by title by the Secretary:

"The Hygiene of Pregnancy," by Dr. Samuel C. Busey, of Washington.

"Rapid Dilatation of the Cervical Canal," by Dr. William Goodell, of Philadelphia.

"The Physiognomy of the Vulva as a Sequence of Anal Disease, and the Cause or Sustaining Cause of Uterine Disease," by Dr. Isaac E. Taylor, of New York.

"The Early History of the Treatment of Vesico-Vaginal Fistule in the United States, and the Statistics of the Several Modes of Operating," by Dr. Nathan Bozeman, of New York.

"Periodical Symptoms in Uterine Disease," by Dr. George J. Engelmann, of St. Louis.

"Contributions to the Topographical and Sectional Anatomy of the Female Pelvis," by Dr. David Berry Hart, of Edinburgh; presented by Dr. Alexander J. C. Skene, of Brooklyn.

"Fibro-Myomata and Fibro-Cystic Myomata of the Uterus: their Diagnosis, Prognosis, Pathology, and Treatment; with Cases and Specimens," by Dr. R. Stansbury Sutton, of Pittsburg.

"On the Ring of Bandl," by Dr. William T. Lusk, of New York.

BUSINESS MEETING.

The annual meeting for private business was held on Wednesday evening, when the reports of the Treasurer and Auditing Committee were read and adopted. The proposed amendments to the constitution and by-laws, which had lain over from last year, increasing the limit of membership to one hundred, were adopted. An amendment proposed by Dr. Emmet last year, making a slight change in the method of election, and requiring that all names of candidates for Fellowship should be brought before the Society by the Council before final action upon them, was also adopted.

Dr. BABCOCK, of London, England, was elected to honorary membership. No active members were elected.

The following officers were elected for the ensuing year:

*President.*—William T. Howard, M.D., of Baltimore, Maryland.

*Vice-Presidents.*—W. L. Richardson, M.D., of Boston, Massachusetts; Paul F. Mundé, M.D., of New York.

*Secretary.*—Frank P. Foster, M.D., of New York.

*Treasurer.*—Matthew D. Mann, M.D., of Buffalo, New York.

*Other members of Council.*—Drs. A. Reeves Jackson, H. P. C. Wilson, J. Taber Johnson, and Ely Van de Warker.

The city of Washington, D.C., was selected as the next place of meeting, in September, 1885,—the time of meeting to be the third Tuesday and the two following days.

BANQUET.

The Society was the guest of the Chicago Gynæcological Society at a grand banquet given at the Palmer House on Tuesday evening, at which Dr. A. Reeves Jackson presided. A large number were present, including many prominent members of the local profession.

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## PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, September 25, 1884.

The President, JAMES TYSON, M.D., in the chair.

DR. GUY HINSDALE exhibited a model of *phantom brain.*

The model is constructed in colossal proportions, and is intended to show the course of the fibres in the human brain, and their

relation to the several nuclei and to the spinal cord. The preparation has been recently purchased for the Mütter Museum of the College of Physicians, and was constructed by Buechi, of Berne, Switzerland, under the supervision of Prof. Acby.

Its height is one hundred and twenty-five centimetres; its width, seventy centimetres. The cortex is dotted over with numerous corks, two centimetres long, which are distributed in systematic order. The basal nuclei, of a much larger size, are seen in their appropriate places. The spinal cord, made up of ganglia and columns of wires of different colors, is represented throughout a portion of the cervical region. These columns of the cord, of different colors to distinguish their function, lead to their appropriate ganglia of corresponding color, or to the areas in the cortex which are marked by similarly-colored corks.

Taking first the anterior and lateral columns of the cord painted red, we can trace these motor fibres to the anterior and lower portion of the medulla, where they decussate, through the pons, to the internal capsule, where, between the caudate nucleus of the corpus striatum and the optic thalamus, they radiate to the cortex. They are seen to come chiefly from the convolutions about the fissure of Rolando. When red balls are seen from that point, a red motor fibre descends to the anterior or lateral columns. It will be seen that the column of Türck, or direct pyramidal tract, is in relation with the posterior part of the lateral column of the opposite side. As regards the exact localization of the sensory and motor tracts of the spinal cord, there is still some discrepancy of opinion. Prof. Ferrier states that the antero-lateral columns are usually regarded as the chief motor paths. but quotes the more careful experiments of Ludwig and Woroschiloff (1874), who place the motor paths in the lateral columns only. The anterior columns (of Türck) are regarded more as commissural connections between the motor nerves and adjacent segments, and at least not the direct paths of motor impulses proceeding from the brain.

Tracing the fibres of the posterior columns, colored blue, we find them represented as wholly decussating in the medulla, forming the posterior third of the internal capsule, thence passing to the corpora quadrigemina and optic thalami, colored blue, which are the great centres of sensation.

The external portion of the lateral columns, colored green, are seen to lead to the cerebellum, decussating near its superior surface. The yellow fibres of the model place the basal nuclei in communication with the cortex; the white fibres, constituting the corpus callosum, are purely commissural. The columns of the cord, as represented in the model, correspond precisely with the arrangement given by Flechsig, and endorsed by Charcot and Hammond. Ludwig and Woroschiloff* argue that "a vicarious interchange of function potentially exists between different parts of the cord." Ferrier admits that, in determining the course of the cerebral fibres, anatomy reveals very little, and that physiological experiment is practically the only means at our command. Many more observations and experiments will have to be made before it can be said that the sensory and motor paths have been exactly defined, and all views reconciled.

*A case of infantile mollities ossium.* Presented by Dr. CHARLES MEIGS WILSON for Mr. CLINTON DENT, of St. George's Hospital, London.

This specimen was sent to me by Mr. Dent, the well-known editor of the English edition of Billroth's "Notes on Clinical Surgery." The following history was also furnished by Mr. Dent: "This specimen shows the inner vertical half of the right femur of a child æt. 16 months. There is a pseudo-fracture of the bone. The medullary canal is filled up, and a considerable deposit of enveloping callus maintains the fragments in apposition. The entire bone is unnaturally soft, and in the recent state showed this peculiarity still more strongly. The bone was removed post mortem from the body of a feeble, ill-nourished child. No history of syphilis was obtainable from the parents, and the child showed no evidence of congenital syphilis. Some of the ordinary symptoms of rickets were observable,—*e.g.*, bending of the ribs, general tenderness, enlargement of the wrists, etc. No symptoms of scurvy were present. It was evident that there was much more than rickets in the condition. When the child was first admitted to the hospital, there were pseudo-fractures of the right humerus and left tibia, besides the fracture of the right femur. The humerus, which was bent at a right angle, was forcibly straightened. It bent like a bar of soft metal, and remained in the new position; it was, however, put in a light pasteboard splint. Subsequently, with the removal of the splint, the bone again gradually bent, and was again forcibly straightened. While in the hospital under observation, the femora became affected in the usual place,—*i.e.*, a little below the trochanters. Some swelling and tenderness were noticed; and then, although the child was kept constantly in bed, the bones became bent. Ultimately, in about ten days, the pseudo-fractures became complete. Great improvement of general health, as evidenced by rapid increase of weight, resulted from treatment by rest, good diet, and cod-liver oil. The child finally died with an attack of whooping-cough, after having been under observation a few weeks."

This is a very rare form of bone-disease,

* Ferrier, Functions of the Brain, p. 5. London, 1876.

especially in the young. It is seen occasionally in England, never with us. The pathological changes seem to be of a retrograde character: sometimes lipomatosis takes place; sometimes there is a metamorphosis, first into cartilage, and then into embryonic tissue. This specimen shows, in different portions, both changes. The disease is attended with marked fatality. In this specimen the cortical substance is attenuated, and the medullary cavity is enormously enlarged. The bone seems deficient in lime-salts. Some authorities believe that to the lactic acid found in the chemical analysis of such bones this change is to be attributed; but this fact is mentioned only in order to elicit discussion. Other observers have found enormous quantities of oxalate of lime in the urine of patients with malacosteon. One curious fact is the effort which nature makes to repair the fractures, as shown in this specimen. This callus seems deficient in inorganic matter, and is destined eventually to be reabsorbed. Syphilis, scrofula, and scorbutus have all been assigned as causes of the affection. Most authorities, denying the existence of the disease in children, assign it to middle life, and speak of it as being lighted up or aggravated in women by pregnancy.

## NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held September 24, 1884, GEORGE F. SHRADY, M.D., President, in the chair.

### MALIGNANT DISEASE OF THE LUNG AND MEDIASTINUM.

Dr. VAN GIESEN presented the specimen, for which he was indebted to Dr. French. The patient was aged 41 years, a German. She was admitted to the hospital September 11, 1884. Over the upper portion of the right lung there was entire absence of the respiratory murmur, of vocal fremitus, and of dulness on percussion. The patient was much emaciated. There was œdema of the left upper eyelid. There was no œdema of the extremities. There were tympanites and dyspnœa, cough without expectoration, nausea without vomiting. The physical signs over the left side of the chest were normal. There was no history of cancer in the family. Death ensued on the 16th of September. The brain was not examined. The heart was normal. The pericardial sac contained eight ounces of clear serum. In the anterior mediastinum was a mass of hard, cancerous glands, of the size of the fist. The upper part of the right lung was infiltrated with hard, cancerous tissue. The remainder of the lung, with the exception of some adhesions at the base, was healthy. The left lung was normal. The bronchial glands were enlarged. The right bronchus was constricted to the size of a No. 8 English catheter.

The spleen was normal, as were also the kidneys. The liver was slightly fatty. Unfortunately, the uterus was not examined. An imperfect microscopical examination pointed to sarcoma of the mediastinum and lung.

This was the fourth or fifth case seen by Dr. Van Giesen within the past three years, and he had found an important feature in the diagnosis to be absence of vocal fremitus. Usually in cases of condensation of the lung we expected to find vocal fremitus more or less exaggerated. In the present instance we could readily account for its absence by the closure, nearly complete, of the right bronchus.

With regard to œdema of the eyelid, this was present also in one of the other cases, due, as Dr. Van Giesen believed, to pressure upon the vessels of the corresponding side by the enlarged glands.

### PHAGEDENIC SYPHILIDES.

Dr. WYETH presented a hospital patient, aged 35 years, a native of Germany, who was admitted on the 11th of July. The patient had had gonorrhœa on several occasions, the last attack being eight months before his admission, but he gave no history of syphilis until five and a half weeks prior to July 11, when he had connection with a prostitute, and one week later noticed what looked like a blister, a quarter of an inch in diameter, at the base of the penis. He had not been with a woman previous to this time for some weeks. The sore remained stationary about ten days, and then began to enlarge and become painful. Before admission the sore on the penis and groin was treated with iodoform and charcoal poultices. It had attained to considerable size, and was deeply excavated. On admission there was a slight pustular and papillary eruption over the face and extremities. The glands were enlarged. There was a sore on the tongue, and some elevation of the temperature. When Dr. Wyeth first saw the patient, August 7, the eruption was well established, and at places, especially on the nose, presented the appearance of lupus, but it was evident from the history that it was a phagedenic syphilide, which had come on in the early stage of the constitutional affection. Dr. Wyeth thought this case illustrated the statement of Bumstead and Taylor, that a pustular syphilitic eruption was apt to follow the phagedenic syphilitic ulcer, and the violence of the disease was in many cases proportionate to the violence of the initial lesion. Up to the time that he saw the patient, blue mass had been administered in small doses, but without apparent effect. He then gave him increasing doses of the proto-iodide of mercury until the effects had become manifest. He thought the strongest proof of the specific origin of the eruption was its response to the antisyphilitic remedy.

Referring incidentally to the treatment, Dr. Wyeth said he regarded mercury as the remedy for syphilis, just as quinine was the remedy for malaria. Nevertheless, there were many cases of a mild nature, and the patients may get well without any medicine whatever. Indeed, one might well prefer syphilis to pneumonia or typhoid fever.

Dr. LEVY spoke of the importance of administering tonics when indicated, and the PRESIDENT said that he had often found a tonic course of treatment all that was necessary.

## REVIEWS AND BOOK NOTICES.

MALARIA AND MALARIAL DISEASES. By GEORGE M. STERNBERG, M.D., F.R.M.S., Major and Surgeon United States Army, Member of the Biological Society of Washington, late Member of the Havana Yellow Fever Commission of the National Board of Health, Corresponding Member of the Epidemiological Society of London, etc. 8vo, pp. 329. New York, William Wood & Co., 1884.

Dr. Sternberg's eagerly-looked-for book is an extremely important and valuable number of the Messrs. Wood & Co.'s current annual series. The author has brought to the difficult task of its preparation lively interest in the subject, long familiarity with the obscure problems relating to malaria and its alleged causes, practical knowledge of malarial diseases, and, to regulate all, the scientific spirit. The result is an able presentation and review of the facts as they at present stand. To those positive persons who must have a theory for all things, this book will prove a disappointment. The author has fully recognized that the unsolved problems connected with the subject are not to be settled with the pen,—a fact that he is in the very best position to know. He has, therefore, presented his case as it stands, realizing that further evidence must be submitted ere a verdict can be reached.

But to those who desire the known facts concerning the periodical diseases gleaned from the experience of the best observers in all regions of the world where they prevail, with a full exposition of current theories and an uncompromising criticism of the same, this book will be welcome and useful. It should be read by every practitioner of medicine, we were about to say, from St. Johns to Santa Barbara,—the ancient phrase is better, from Dan to Beersheba,—for malaria is widely prevalent. J. C. W.

THE REFRACTION OF THE EYE. By GUSTAVUS HARTRIDGE, F.R.C.S. J. & A. Churchill, London, 1884.

This little work supplies a want, and need only to be examined by those beginning the study of refraction to be appreciated. The first chapter is devoted to some general principles of optics; the second, to the refraction of the eye, accommodation, and convergence; the third, to the diagnosis of refraction errors; and succeeding chapters to hypermetropia, myopia, presbyopia, astigmatism, etc. Quite a full description of retinoscopy is given, and also some account of the ophthalmometer of Taval and Schiötz. A series of test-types is appended. The book is well printed, and the illustrations are numerous and excellent. Two criticisms only suggest themselves to us:

1. That the large and important works on Anomalies of Refraction by Mauthner and by Nagel (Graefe u. Saemisch, Handbuch der Augenheilkunde) seem not to have been consulted in the preparation of the book.

2. The error common to many medical books of not defining with exactness the facts and observations which are presented. Thus, in speaking of the shortening of the axis in hypermetropia, our author says, "So constant and regular is this decrease that from the amount of hypermetropia can be estimated the diminution in length of the axial line." Upon this principle a table is constructed showing the amounts of shortening which occur in different degrees of hypermetropia. Now, this is erroneous. The error results from not defining with exactness the statement that hypermetropia is due to shortening of the axis of the eye. One cannot, by taking the length of the diagrammatic eye and calculating the shortening which would occur in a given grade of hypermetropia, say that that amount of shortening exists in an actual case of hypermetropia. We commend, however, this book as one which will add to the reputation of the author. H.

HAND-BOOK OF THE DIAGNOSIS AND TREATMENT OF SKIN DISEASES. By ARTHUR VAN HARLINGEN, M.D., Professor of Diseases of the Skin in the Philadelphia Polyclinic and College for Graduates in Medicine, etc. With Two Colored Plates. Philadelphia, P. Blakiston, Son & Co., 1884. 8vo, pp. 282.

This new hand-book is essentially a small encyclopædia of pathology and treatment of skin diseases, in which the subjects are arranged alphabetically. This arrangement was that followed by the late Tilbury Fox, of London, in his hand-book, which, we believe, was remarkably successful; and we have no doubt that it will be equally appreciated in the present work, which (compendious in form) contains a very complete summary of the present state of dermatology. Dr. Van Harlingen's position in the profession, being at present Vice-President of the American Dermatological Association, which he served as Secretary for several years, and the high standard of his communications to his department, are sufficient to warrant the confidence

in his teachings which is fully sustained by an examination of this hand-book, which we heartily commend for its brevity, clearness, and evidently careful preparation.

THE PEDIGREE OF DISEASE: BEING SIX LECTURES ON TEMPERAMENT, IDIOSYNCRASY, AND DIATHESIS, DELIVERED IN THE THEATRE OF THE ROYAL COLLEGE OF SURGEONS IN THE SESSION OF 1881. By JONATHAN HUTCHINSON, F.R.S., late Professor of Surgery and Pathology in the College; Emeritus Professor of Surgery in the London Hospital; President of the Ophthalmological Society, etc., etc. 8vo, pp. 136, London, J. & A. Churchill, 1884.

These lectures, delivered in June, 1881, now reprinted in book form, are thus happily rescued from the oblivion of their first appearance in one of the medical journals. Why the author should have so long delayed their publication in the present form is not apparent. His admission that the commendation bestowed upon them by Sir James Paget last year induced him to publish them now shows how near they came to not being republished at all. That would have been a serious loss to medical literature, notwithstanding its oppressive abundance. This kind of work is far from abundant: would it were more so! When we think of the author's work, the Virgilian "Felix qui potuit rerum cognoscere causas" comes to mind; and these lectures are in his best vein. Dealing with a group of cognate subjects that are little thought of and still less understood, yet of eminent practical importance; written in a style at once lucid and attractive; clear, learned, and reasonable, these lectures will be read with equal interest and profit by those clinicians who seek to temper their knowledge of things with knowledge of the causes of things.

J. C. W.

DISEASES OF THE HEART AND THORACIC AORTA. By BYROM BRAMWELL, M.D., F.R.C.P.E., etc., etc. With 317 Illustrations. 8vo, pp. 783. Edinburgh, Young J. Pentland, 1884.

It affords us pleasure to commend in the strongest terms this excellent treatise. In doing this, we are prepared to reply, to any challenge that may be made as to our reasons,—first, that Dr. Bramwell's work is literally *excellent* among recent books upon the heart in convenience of arrangement and in comprehensiveness; second, that it is singularly full and clear in the sections on pathology; and, third, that the subject of treatment is handled with judgment and brought up to date.

The full-page lithographs are of great general value, and will be especially useful to those students and practitioners whose opportunities in the dead-houses of hospitals or in museums are few and far between. J. C. W.

## GLEANINGS FROM EXCHANGES.

"THE LANCET" ON MODERATE DRINKING AND TEETOTALISM.—At the recent Health Exhibition in London the subject of intemperance was discussed, and the use of alcoholic liquors condemned in no measured terms. The *Times* thereupon published a leading article defending moderate drinking, and stated that teetotalers are persons of inferior physical development, and, so far as they can be judged by facial expression, not "remarkable for intellectual power," the best work of the world being done by the moderate drinkers. On the whole, it was concluded that teetotal societies do very little good and a great deal of harm. The *Lancet*, in commenting upon this, without attempting to defend the dogmatism of temperance reformers, says, "We cannot much approve of the article in our contemporary, but it is rather of its tone and spirit than of its substance that we have to complain; rather with its scant and reluctant praise—its actual dispraise—of men with a great cause and with good motives, than with its scientific propositions, that we have to quarrel. The world is not so much in danger of neglecting to take a proper amount of alcohol that it needs three or four columns of ingenious argument to prevent it falling a prey to indigestion and nervous exhaustion from drinking water alone. But the excuse for such writing would be less if there were a little more reasonableness and temperance on the part of those who seek to abate the national consumption of alcohol. Their case is by no means so contemptible, logically and medically, as the writer referred to above would make out. There are some very good looking fellows among them; they are not by any means intellectually contemptible; they live quite as long as, if not longer than, other people, and escape many diseases that affect others, though they have their own liabilities. They are good workers. There may not have been yet a teetotal Shakspeare or Milton,—there has not been time; but much of the best work of the world nowadays is done by men who either do not use alcohol, or use it in such quantities as to be inoperative physiologically or pathologically. And the common work of the world is done well by abstainers: they are industrious, reliable, healthy. According to Lord Wolseley, they make good soldiers. Sir William Gull has said that 'it is one of the commonest things in our society for people to be injured by drink without being drunkards. It goes on so quietly that it is very difficult to observe. To the professional eye the effect is perfectly marked and distinct.' Many other eminent men have given similar testimony. So that there is an amount of drinking deemed moderate by society which, in the opinion of judges, is very injurious to the liver, the lungs, the nervous

centres, etc. Further, the actual impression made by the teetotal school on public opinion and social habits is considerable, so that sensible men do not take stimulants in the quantities they used to do, or on an empty stomach and without food. No doubt much of this is due to sounder medical science, and to the extreme moderation of medical prescription and example. But part of it is due to teetotalism and to religious efforts to promote sobriety, which it should be the desire of every one to second, the more so as there is still a frightful amount of ignorance abroad as to the impunity with which alcohol, even in strong forms, may be taken into an empty stomach. A physiologist may still be shocked every day in a restaurant or a railway refreshment-room —of course physiologists never go into public houses—by seeing young men order and toss off without thought and without food glasses of spirit more or less raw. He knows how infallibly and how quickly that leads to mischief. But for evils and follies like this there is room for common protest and effort, apart from intemperate doctrines of teetotalism on the one hand, and too easy disparagement of those who hold them on the other."

ABORTIONS, AND ELIXIRS CONTAINING STRYCHNINE.—Dr. George Pringle, in a communication to the Canada *Lancet*, points out a new danger from the use of the favorite elixirs containing strychnine. In three cases out of four, in which pregnancy was not suspected, the use of strychnine with a chalybeate brought on an abortion, and the fourth had symptoms of abortion which passed away on stopping the treatment, and again returned upon resuming it, so that the remedy had to be abandoned, and a tonic without the strychnine substituted. He advises that strychnine should not be given after conception has taken place, and that manufacturers should omit both strychnine and arsenic from elixirs sold to supply popular demand.

## MISCELLANY.

THE CRIMINALITY OF CANNIBALISM.—The criminality of cannibalism committed by starving men is soon to be tested in an English court, under peculiar and interesting circumstances. The English yacht "Mignonette" was cast away in the South Atlantic Ocean, and the crew, consisting of the captain, two men, and a boy, were obliged to take to the boat. They drifted about in the open sea for a number of days until all their food was exhausted. They were fortunate enough then to kill a turtle, and thus sustained life for a time. When this was gone, they talked of drawing lots to see who should die for the others. This not being agreed to, and the boy becoming very weak and apparently about to die, the captain decided to kill him in order to save the lives of the others.

After calling upon God to pardon the act, he killed the youth, and the three survivors were kept alive by eating his flesh until a passing vessel picked them up. The facts were not concealed, and the act was not seemingly considered criminal, but on arrival in port the captain was arrested, and his trial is soon to take place for murder. The trial will bring out the fact that unless the captain had done as he did, the lives of all would probably have been lost; but the moral effect of the deed may not be affected by this circumstance. It will also be shown that the four had been tossed about for fifteen days in an open boat, without food, before consenting to the killing; and it will be a matter for consideration whether a person is responsible for his acts under such circumstances.

OWNERSHIP OF MEDICAL SPECIMENS.—A case involving the right to a medical specimen has just been before a court in Petersburg, Virginia. A person suffering from some internal complaint, which kept him remarkably thin, although enjoying a ravenous appetite, solved the problem of his ailment by ejecting a dead lizard some ten inches long. The curious object was thrown away, but was found and preserved in alcohol by a physician. This was ascertained by the brother of the reptile-ejector, who was also a physician, and was demanded by him from the finder. The latter consented to give it up if he were repaid the cost of preserving it. This was refused, and suit brought to recover the specimen. On the trial in one of the inferior courts judgment was given requiring the finder to give it up. This verdict has been appealed from, and the matter is undecided.

A SUIT AGAINST A DENTIST.—A San Francisco dentist has brought upon himself a heavy verdict for damages in the following way. He agreed with a patient to fill her teeth for seventeen dollars and a half, but demanded five dollars more upon the completion of the work, and, when she declined to pay that amount, forcibly removed the fillings. Suit was then brought for damages, and the jury has just awarded a verdict for two hundred and seventeen dollars and a half, besides costs of the suit.

DR. DELAFIELD, of New York, will read a paper on "Broncho-Pneumonia" at the next semi-annual meeting of the Pathological Society, to be held at the College of Physicians and Surgeons, Thirteenth and Locust Streets, October 23, at eight o'clock P.M. The members of the profession generally are cordially invited.

A DEATH FROM ETHER occurred at the St. Mary's Hospital, in this city, on the 14th instant, a report of which is deferred until the result of the autopsy can also be published.

# NOTES AND QUERIES.

## TREATMENT OF MIGRAINE.

To the Editor of the Philadelphia Medical Times:

In the *Bulletin Général de Thérapeutique* of August 30, 1884, there is a statement accredited to your journal that bromide of potassium and deodorized tincture of opium in combination may be considered "almost a specific" for the pains of migraine. I wish to add my testimony to the efficacy of this treatment, or one which is virtually the same. Since my earliest recollection I have been a sufferer from this affection, and after trying guarana, caffeine, bromide of potassium alone, and every other agent which could be thought of, and enduring an amount of torture which those only can appreciate who have themselves been sufferers, I have found prompt and invariable relief from a combination of bromide of potassium and morphia, or bromide of potassium and codeia. I can count on relief in half an hour after taking thirty grains of bromide of potassium and one-third of a grain of morphia or three-quarters of a grain of codeia, and so complete is this relief that I have more than once been able to perform delicate operations when an hour before I could not hold up my head, and when my hand had been so tremulous that I could scarcely hold a knife. Within the past fortnight I have tied the common carotid under just such circumstances, and a few months ago I had to do a tracheotomy under like conditions.

No doubt many other physicians have employed this combination with advantage. Indeed, so rational did the treatment seem to me that I should never have thought of mentioning it but for the extract from your journal which has just come to my notice.

Yours respectfully,
Wm. C. Dabney, M.D.

Charlottesville, Virginia,
October 7, 1884.

# OFFICIAL LIST

## *OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM SEPTEMBER 28, 1884, TO OCTOBER 11, 1884.*

Clements, B. A., Major and Surgeon.—In addition to present duties, to take charge of the office of the Medical Director of the Department during the temporary absence of that officer. Paragraph 1, S. O. 195, Department of Missouri, September 29, 1884.

Happersett, John C. G., Major and Surgeon.—Will be relieved from duty in Department of the East, and ordered for duty at Willet's Point, New York.

Woodruff, Ezra, Captain and Assistant-Surgeon.—Granted leave of absence for four months.
S. O. 235, A. G. O., October 7, 1884.

Bentley, Edwin, Major and Surgeon.—Granted two months' leave of absence, with permission to apply for two months' extension, to take effect upon assignment to duty in Department of Texas of Surgeon F. L. Town. S. O. 121, Headquarters Division of the Missouri, September 30, 1884.

Bartholf, John H., Captain and Assistant-Surgeon.—Assigned to duty at Fort Ringgold, Texas, as post surgeon. Paragraph 5, S. O. 129, Headquarters Department of Texas, September 25, 1884.

Cronkhite, Henry M., Captain and Assistant-Surgeon.—Assigned to duty as post surgeon, Fort Reno, Indian Territory. S. O. 197, Department of Missouri, October 2, 1884.

Loring, Leonard Y., Captain and Assistant-Surgeon.—From Department of the East to Department of California.

Harvey, Philip F., Captain and Assistant-Surgeon.—From Department of Dakota to duty in Attending Surgeon's Office, Washington, D.C., relieving

Shufeldt, Robert W., Captain and Assistant-Surgeon,—who, on being relieved, will report to commanding general, Department of Missouri, for duty.
S. O. 237, A. G. O., October 9, 1884.

Crampton, L. W., Captain and Assistant-Surgeon.—Granted leave of absence for one month and ten days. S. O. 60, Headquarters Division of the Atlantic, October 2, 1884.

Powell, J. L., Captain and Assistant-Surgeon.—Granted leave of absence for one month, on surgeon's certificate of disability.

Spencer, William G., Captain and Assistant-Surgeon.—Granted leave of absence for one month
S. O. 204, Headquarters Department of the East, October 8, 1884.

McCreery, George, First-Lieutenant and Assistant-Surgeon.—Assigned to duty at Fort Meade, Dakota Territory. S. O. 115, Headquarters Department of Dakota, October 6, 1884.

Gibson, R. J., First-Lieutenant and Assistant-Surgeon.—Assigned to duty as post surgeon, Fort Winfield Scott, California, relieving Assistant-Surgeon A. S. Polhemus.

Polhemus, A. S., First-Lieutenant and Assistant-Surgeon.—Upon being relieved, to report to commanding officer, Fort McDermit, Nevada, for duty as post surgeon.

White, R. H., Captain and Assistant-Surgeon.—To report to commanding officer, Angel Island, California, as post surgeon, relieving Assistant-Surgeon C. K. Winne.

Winne, C. K., Captain and Assistant-Surgeon.—Upon being relieved, to report to commanding officer, Benicia Barracks, California, for duty as post surgeon, relieving Surgeon C. C. Byrne.
Paragraph 1, S. O. 115, Headquarters Department of California, September 23, 1884.

Taylor, A. W., First-Lieutenant and Assistant-Surgeon.—Assigned to duty at Fort Omaha, Nebraska. Paragraph 3, S. O. 87, Headquarters Department of the Platte, October 3, 1884.

Everts, Edward, First-Lieutenant and Assistant-Surgeon.—Granted leave of absence for one month, with permission to leave the limits of the Department. S. O. 145, Headquarters Department of Colorado, September 24, 1884.

Black, C. S., First-Lieutenant and Assistant-Surgeon.—Granted leave of absence for fifteen days, to take effect this date. Paragraph 3, S. O. 131, Department of Texas, September 29, 1884.

## *LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM SEPTEMBER 28, 1884, TO OCTOBER 11, 1884.*

Surgeon Henry Stewart, granted leave of absence for one year, with permission to leave the United States, October 15, 1884.

P. A. Surgeon John M. Edgar, detached from the "Nantucket," and placed on waiting orders, September 29, 1884.

P. A. Surgeon G. E. H. Harmon, to the Naval Academy, September 30, 1884.

P. A. Surgeon D. N. Bertolette, from the Naval Academy to the "Dolphin," October 4, 1884.

P. A. Surgeon Benjamin F. Rogers, to the Naval Academy, September 30, 1884.

Surgeon George H. Cooke, from the Naval Academy, and placed on waiting orders, October 2, 1884.

P. A. Surgeon Robert Whiting, from the Naval Academy, and placed on waiting orders, October 4, 1884.

P. A. Surgeon G. C. Lippincott, granted sick-leave, October 4, 1884.

P. A. Surgeon Robert Whiting, to the Naval Hospital, New York, October 6, 1884.

P. A. Surgeon S. A. Brown, resignation accepted, October 7, 1884.

Surgeon George R. Brush, detached from the "Vandalia," and placed on waiting orders, October 8, 1884.

P. A. Surgeon Thomas C. Craig, detached from the "Vandalia," and placed on waiting orders, October 8, 1884.

Surgeon Joseph G. Ayers, leave of absence for one month, October 10, 1884.

Surgeon A. S. Oberly, to the Naval Hospital, Portsmouth, New Hampshire, October 10, 1884.

Medical Inspector C. J. Cleborne, detached from duty at Portsmouth, N.H., and placed on waiting orders, October 10, 1884.

P. A Surgeon John W. Steele, detached from the "Brooklyn," and placed on waiting orders, October 10, 1884.

P. A. Surgeon John C. Boyd, to duty at Navy-Yard, Washington, D.C., October 10, 1884.